

DENON

Hi-Fi Personal Component System

Europe Model

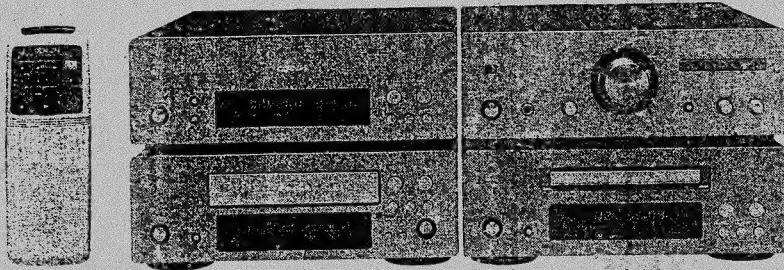
PERSONAL COMPONENT SYSTEM D-F10

UNIT No. UTU-F10 (AM, FM Stereo Tuner)

UNIT No. UPA-F10 (Pre-Main Amplifier)

UNIT No. UCD-F10 (Compact Disc Player)

UNIT No. UDR-F10 (Cassette Tape Deck)



COMPACT
disc
DIGITAL AUDIO

• The D-F10 Personal Component System consists of the following:

AM/FM Stereo Tuner Unit	UTU-F10
Remote Control Unit	RC-172
Pre-Main Amplifier Unit	UPA-F10
CD player Unit	UCD-F10
Cassette Deck Unit	UDR-F10

MAIN FEATURES

- **RDS compatible**
Compatible with various RDS services, including program service name (PS), program type identification (PTY), traffic program identification (TP) and clock time (CT).
- **Quality power for high quality sound**
55W + 55W (1 chm DIN) high quality amplifier and terminals for large speakers.
- **High sound quality, multi-function CD player**
Edit function for automatically dividing the tracks on a CD for recording onto sides A and B of a tape. S.L.C for playback with high quality sound.
- **Cassette deck with Dolby B, C and HX-Pro circuits**
For playback and recording of high quality sound.

BEFORE USING

• Moving the system

To prevent short-circuiting or damage of connection cords, be sure to unplug the power cord and disconnect all connection cords before moving the system.

In addition, always remove CDs before moving the system. If not, the CD may be scratched.

• Before turning the power on

Check again that all connections are proper and that the connection cords are not damaged. Always set the power switch to the STANDBY position before disconnecting connection cords.

Check that the following parts are included in the package aside from the main unit:

• UPA-F10 (pre-main amplifier unit)	1
• Remote control unit (RC-172)	1
• R6P/AA batteries	2
• Operating instructions	1
• UTU-F10 (AM/FM stereo tuner)	1
• FM antenna	1
• AM loop antenna	1
• System connector cable	1
• RCA pin-plug cord	1
• AC cord	1
• Inst. Sheet	1

- **Two types of timers**
Two timer settings can be made - everyday and sleep.
- **Easy-to-use remote control unit**
The most frequently used keys are located on the front, with the remaining keys enclosed under a sliding cover.
- **Auto on function**
The power turns on automatically and playback begins when the play button on the CD player or the cassette deck or the tuner preset up/down buttons on the remote control unit are pressed.

- Humming may be produced if the system is set near a TV set or other audio component or its connection cords. If this happens, try changing the position of the equipment and connection cords.
- Do not move the system abruptly from a cold place to a warm place, as this may cause dew (water droplets) to form in the set, preventing proper operation. If this happens, wait one hour before using the system.
- **Be sure to keep this manual**
The illustrations used in this manual may differ from the actual system.

• **UCD-F10 (compact disc player)**

• System connector cable	1
• RCA pin-plug cord	1
• AC cord	1
• Inst. Sheet	1
• UDR-F10 (cassette tape deck)	1
• System connector cable	1
• RCA pin-plug cord	2
• AC cord	1
• Inst. Sheet	1

NIPPON COLUMBIA CO., LTD.

GENERAL SECTION

GENERAL SECTION

TABLE OF CONTENTS

General Section (Page 1 ~ Pages 28)

• Main Features	1
• Before Using	1
• Main Specifications	3
• Operating Instructions	4~28

Tuner Section (Pages 29 ~ Pages 52)

• Block Diagram	29
• Disassembly Procedures	30, 31
• Adjustments	32~34
• Semiconductors	35~41
• Microprocessor Documentation	42, 43
• Printed Wiring Board, Parts List	44~48
• Microprocessor Peripheral Wiring Diagram	49
• Wiring Diagram	50
• Schematic Diagram	51
• Exploded View, Parts List	52

Pre-Main Amplifier Section (Pages 53 ~ Pages 72)

• Remote Control Unit	53
• Block Diagram	54
• Level Diagram	55
• Disassembly Procedures	56, 57
• Adjustments	58
• Semiconductors	59~61
• Microprocessor Documentation	62, 63
• Microprocessor Peripheral Wiring Diagram	64
• Printed Wiring Board, Parts List	65~69
• Wiring Diagram	70
• Schematic Diagram	71
• Exploded View, Parts List	72

PACKING & ACCESSORIES PARTS LIST

Ref. No.	Part No.	Part Name	Remarks	Qty	Ref. No.	Part No.	Part Name	Remarks	Qty
● 1	UTU F10	Tuner Unit	Tuner	1 ^s	● 7	GEN 2742	Envelope Sub. Ass'y-3	included UCD-F10	1 ^s
● 2	UPA F10	Pre-Main Amp. Unit	Amp.	1 ^s	7-1	505 9125 009	-Poly Cover	(1)	
● 3	UCDF10	CD Player Unit	CD Player	1 ^s	7-2	203 2310 009	2P Pin Cord	L=1000	(1)
● 4	UDRF10	Cassette Deck Unit	Cassette Deck	1 ^s	7-3	203 2315 004	Stereo Miniplug Cord Ass'y	L=500	(1)
● 5	GEN 2740	Envelope Sub. Ass'y-1	included UTU-F10	1 ^s	7-4	206 2108 003	-AC Conn. with Plug	(1)	
5-1	505 9125 009	-Poly Cover	(1)		7-5	511 2654 006	Inst. Sheet	(1)	
5-2	231 1914 003	Loop Antenna	(1)		● 8	GEN 2744	Envelope Sub. Ass'y-4	included UDR-F10	1 ^s
5-3	395 0021 000	FM Ant. Ass'y	(1)		8-1	505 8005 019	Envelope	(1)	
5-4	203 2310 009	2P Pin Cord	L=1000		8-2	203 2223 002	2P Pin Cord	L=1000	(2)
5-5	203 2315 004	Stereo Miniplug Cord Ass'y	L=500		8-3	203 2315 004	Stereo Miniplug Cord Ass'y	L=500	(1)
5-6	206 2108 003	-AC Conn. with Plug	(1)		8-4	511 2651 009	Inst. Sheet	(1)	
5-7	511 2653 007	Inst. Sheet	(1)						

SPEAKER SYSTEM PARTS LIST

Ref. No.	Part No.	Part Name	Remarks	Qty
● 6	GEN 2738	Envelope Sub. Ass'y-2	included UPA-F10	1 ^s
6-1	505 8006 019	Envelope	(1)	
6-2	511 2614 004	Inst. Manual	(1)	
6-3	511 2615 003	Inst. Manual	(1)	
6-4	399 0235 005	Remote Control Unit	RC-172	(1)
6-5	—	Batteries	R6P/AA/UM-3	(2)

Ref. No.	Part No.	Part Name	Remarks	Qty
● 1	SCF 10	Speaker System	Speaker System	1 ^s
2	SCF 1000 119	Envelope Sub. Ass'y	(1)	
2-1	ES.NL.S.PO	Envelope	(1)	
2-2	009 0107 007	Out Put Cord Ass'y	L=2000	(2)
3	511 2644 003	Inst. Manual	(1)	
4				

SPECIFICATIONS

■ Pre-main amplifier (UPA-F10)

Practical maximum output:
Low frequency adjustment range:
High frequency adjustment range:
Audio input / output jacks:

55 W + 55 W (4 ohms DIN)
100 Hz ±8 dB
10 kHz ±8 dB
CD input jacks, tape input / output jacks,
tuner input jacks, MD/AUX input / output jacks,
processor loop jacks, 6.3mm headphones jack and phono input jacks
AC 230 V, 50 Hz
130 W
270 (W) × 96 (H) × 342 (D) mm (10-5/8" × 3-25/32" × 13-15/32")
(including feet, controls and terminals)
4.5 kg (9 lbs. 15 oz)

■ Tuner (UTU-F10)

Reception frequency band:

FM: 87.50 MHZ – 108.00 MHZ
AM: 522 kHz – 1611 kHz

Reception sensitivity:

FM: 1.5 μV/75 ohms
AM: 20 μV

FM stereo separation:

40 dB (1 kHz)

Power supply:

AC 230 V, 50 Hz

Power consumption:

8 W
270 (W) × 96 (H) × 318 (D) mm (10-5/8" × 3-25/32" × 12-33/64")
(including feet, controls and terminals)

Weight:

2.8 kg (6 lbs. 3 oz)

■ CD player (UCD-F10)

Wow & flutter:

Below measurable limits
(±0.001% W. peak)

Sampling frequency:

44.1 kHz

Optical source:

Semiconductor

Power supply:

AC 230 V, 50 Hz

Power consumption:

8 W
270 (W) × 96 (H) × 315 (D) mm (10-5/8" × 3-25/32" × 12-13/32")
(including feet, controls and terminals)

Weight:

3.3 kg (7 lbs. 5 oz)

■ Cassette deck (UDR-F10)

Type:

Horizontal 4-track 2-channel stereo cassette deck

1 hard permalloy recording/playback head

1 double-gap ferrite erasing head

4.75 cm/s

Dolby B and C NR, Dolby HX Pro

Normal, chrome and metal

AC 230 V, 50 Hz

13 W

270 (W) × 96 (H) × 313 (D) mm (10-5/8" × 3-25/32" × 12-21/64")
(including feet, controls and terminals)

3.8 kg (8 lbs. 6 oz)

■ Remote control unit (RC-172)

Remote control system:

Infrared pulse

Number of buttons:

50

Power supply:

Two DC 1.5 V R6P/AA batteries

57 (W) × 197 (H) × 21 (D) mm (2-1/4" × 7-3/4" × 53/64")

130 g (including batteries) (Approx. 4.6 oz)

* Maximum dimensions include controls, jacks, and covers.
(W) = width, (H) = height, (D) = depth

● For improvement purposes, specifications and functions are subject to change without advanced notice.

■ Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

● "DOLBY", the double-D symbol and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSAFTRYDRE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.

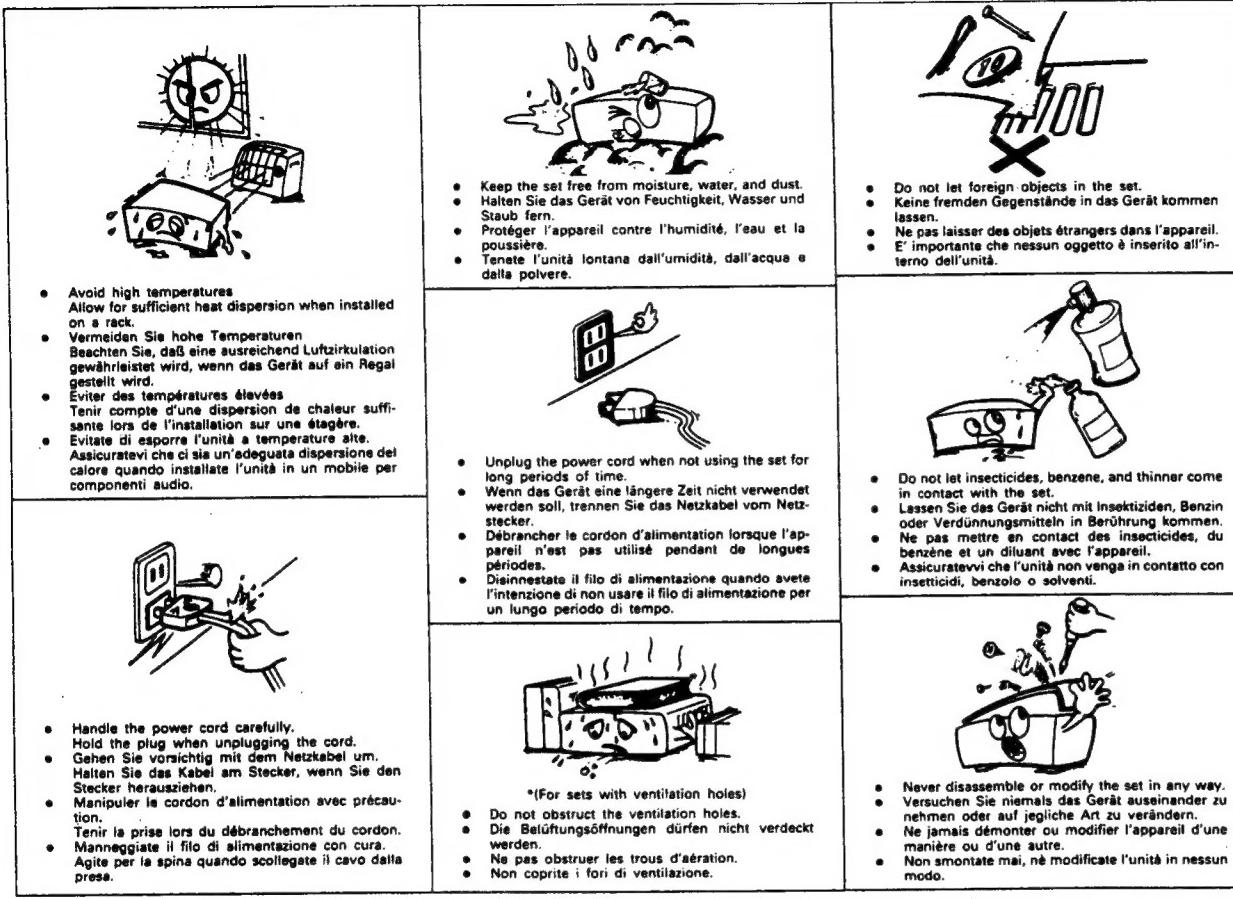
VAROITUS: LAITTEEN KÄYTÄMINEN MUULLA KUN TÄSSÄ YHTÖÖN JEESESSÄ MÄINTÄLLÄ TAVALLA SAATTAA ALTISTAA KÄYTÄJÄÄN TURVALLISUUSLUOKAN 1 YLTTÄVÄLE NÄKYMÄTTÖMÄLLE LASERSATEILYLLÉ.

VARNING- OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN

UTSÄTTAS FÖR OSYNLIG LASERSTRÅLING SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

4

**NOTE ON USE/HINWEISE ZUM GEBRAUCH/OBSERVATIONS RELATIVES A L'UTILISATION
NOTE SULL'USO**



CAUTION/VORSICHT/ATTENTION/AVVISO

- If the system should smoke or produce strange smells, immediately set the power switch to the STANDBY position, unplug the power cord, and contact your store of purchase.
- Sollte das Gerät Rauch produzieren oder eigenartig riechen, stellen Sie den Netzschatzer sofort auf die Position STANDBY (Bereitschaft), ziehen Sie den Netzstecker heraus und kontaktieren Sie Ihren Händler.
- Si de la fumée sort de la chaîne ou des odeurs bizarres, placer l'interrupteur d'alimentation immédiatement sur la position de veille (STANDBY), débrancher le cordon d'alimentation et contacter le distributeur.
- Qualora il sistema dovesse produrre del fumo o degli odori strani, collocate immediatamente l'interruttore di accensione nella posizione STANDBY, disinestate il filo di alimentazione e rivolgetevi al negozio dell'acquisto.

**"SERIAL NO. _____
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE
CABINET FOR FUTURE REFERENCE"**

SAFETY IMPORTANT

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

•NUR FÜR EUROPÄISCHE MODELLE

Konformitätserklärung

Die DENON Electronic GmbH
Halskestraße 32
40880 Ratingen

Erklärt als Hersteller/Importeur, daß das in dieser Bedienungsanleitung beschriebene Gerät den Technischen Vorschriften für Ton- und Fernseh-Rundfunkempfänger nach der Amtsblattverfügung 868/1989 (Amtsblatt des Bundesministers für Post und Telekommunikation vom 31. 8. 1989) entspricht.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAUAPPARAT

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING. NÅR
SIKKERHEDSGÅRDREDE ER UDE AF Funktion.
UNDGÅ UDSETTELSE PÅ STRÅLING.

VÄRNING! LÄTTITSEN KÄYTÄMINEN MUULLA KUN TÄSSÄ
KÄYTÖÖHJÄSSÄ MÄINNULLA TÄVALLA SAATTAA
ALINTAÄÄ KÄYTÄJÄN TURVALLISUUUDUKAN 1
YLTÄVÄLLE NÄKYMÄTÖNALLE LASERSÄTELYILLE.

VAROITUS: OM APPARATEN ANVÄNDAS PÅ ANNAT SATT AN I DENNA
BRUKSANVISNING SPECIFICERADE, KAN ANVÄNDAREN
UTSÄTTAS FÖR OSYNLIG LASERSTRÅLING SOM
ÖVERSKRIDER GRÄNSEN FÖR LASERKLAES 1.

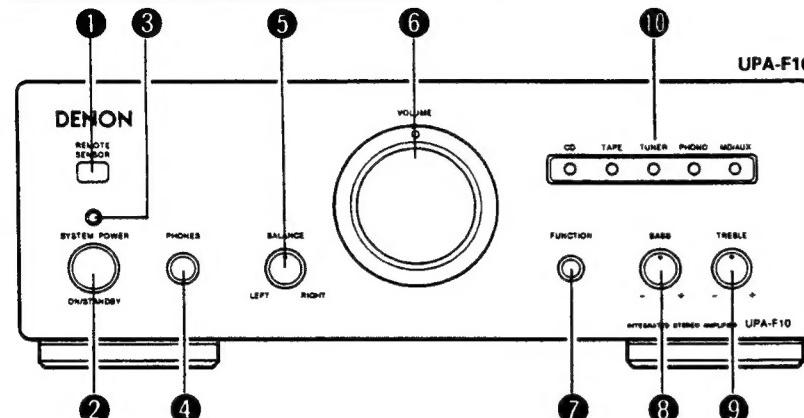
"CLASS 1
LASER PRODUCT"



FRONT PANEL/FRONTPLATTE/PANNEAU AVANT/PANNELLO ANTERIORE

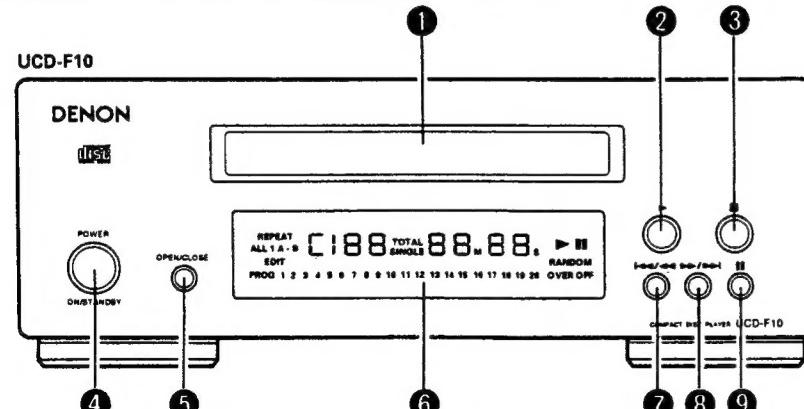
**PRE-MAIN AMPLIFIER
VORVERSTÄRKER
AMPLIFICATEUR-PRÉAMPLIFICATEUR
PREAMPLIFICATORE PRINCIPALE**

See ENGLISH Page 6
Sehen Sie DEUTSCH Seite 30
Voir FRANÇAIS Page 54
Fate riferimento alla sezione ITALIANO
alla pagina 78



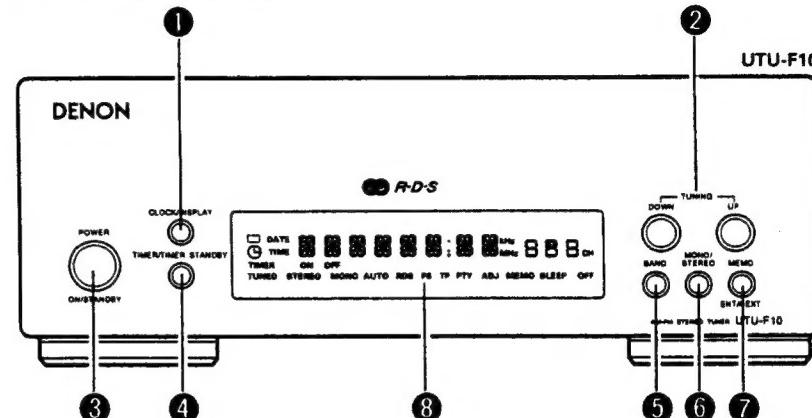
**CD PLAYER
CD-SPIELER
LECTEUR CD
DISPLAY DELLA PIASTRA A CASSETTE**

See ENGLISH Page 7
Sehen Sie DEUTSCH Seite 31
Voir FRANÇAIS Page 55
Fate riferimento alla sezione ITALIANO
alla pagina 79



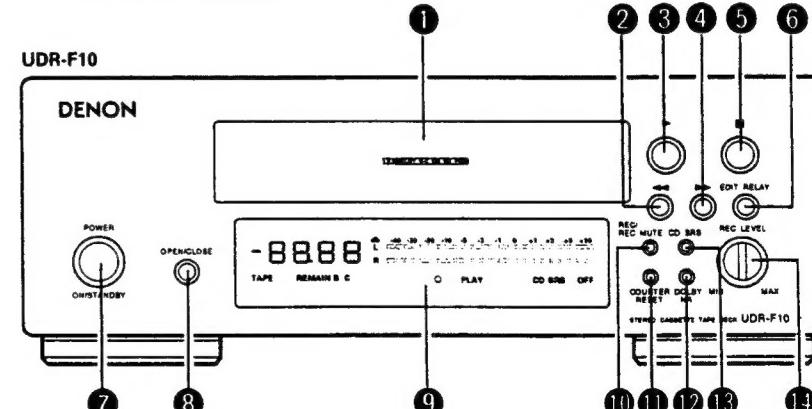
**STEREO TUNER
STEREO EMPFÄNGER
TUNER STÉRÉO
SINTONIZZATORE STEREO**

See ENGLISH Page 6
Sehen Sie DEUTSCH Seite 30
Voir FRANÇAIS Page 54
Fate riferimento alla sezione ITALIANO alla pagina 78



**CASSETTE DECK
CASSETTENDECK
PLATINE CASSETTE
PIASTRA A CASSETTE**

See ENGLISH Page 8
Sehen Sie DEUTSCH Seite 32
Voir FRANÇAIS Page 56
Fate riferimento alla sezione ITALIANO alla pagina 80



- As an aid to better understanding the operation method, the illustrations used in this manual may differ from the actual system.
- Als Hilfestellung zum besseren Verständnis der Betriebsmethode, erlauben wir uns den Hinweis, daß sich die Abbildungen in dieser Bedienungsanleitung leicht von dem aktuellen System unterscheiden.
- Pour faciliter la compréhension de la méthode de fonctionnement, les illustrations utilisées dans ce manuel peuvent être différentes de celles de la chaîne réelle.
- Per rendere la spiegazione del metodo operativo più facile, le illustrazioni usate in questo libretto delle istruzioni possono differire dal sistema stesso.

5 PART NAMES, FUNCTIONS AND DISPLAYS

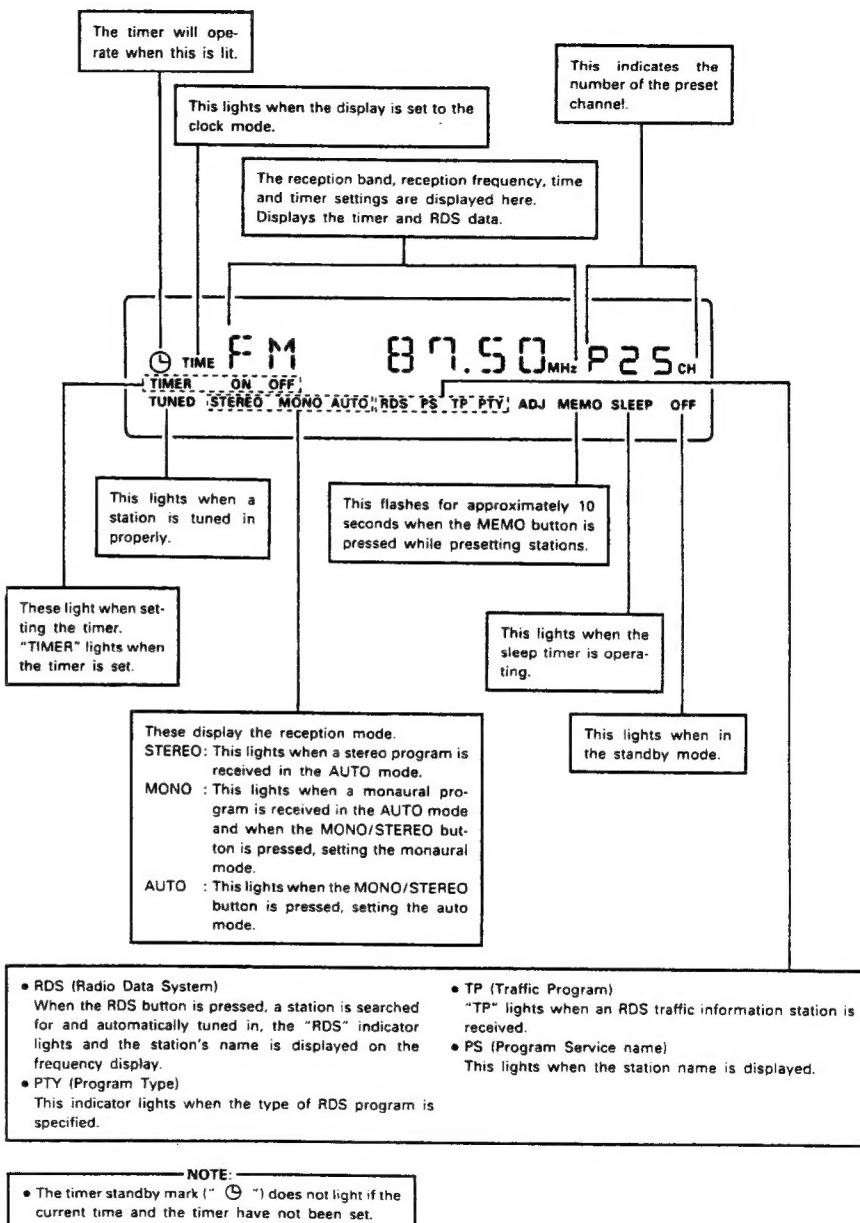
PRE-MAIN AMPLIFIER

- ① **REMOTE SENSOR**
When operating the remote control unit, point it at this sensor.
- ② **SYSTEM POWER switch**
(This turns the power for the entire system on and off.)
Press this once to turn the power on, then press again to set the power to the standby mode.
- ③ **Power indicator**
This lights when the power cord is plugged into a power outlet, and flashes for 5 seconds after the system power is turned on.
- ④ **PHONES (headphones jack)**
Plug the headphones into this jack.
No sound is produced from the speakers when headphones are plugged in.
- ⑤ **BALANCE control**
Use this to adjust the balance of the volume between the left and right channels. When set at the center position, the volume is the same for the left and right channels.

TUNER

- ⑥ **CLOCK/DISPLAY selector button**
This button is used to switch the display between the reception frequency and the clock.
- ⑦ **TUNING UP and DOWN buttons**
These buttons are used to select AM and FM stations and to set the clock and timer.
- ⑧ **POWER switch**
Press this button once to turn the tuner's power on, then press again to set the tuner to the standby mode. In the standby mode, "OFF" appears on the display. Press again to turn the mark off.
The timer will not operate when the "⑨" mark is off.
- ⑩ **TIMER/TIMER STANDBY button**
Press this when setting the timer and to turn the timer on so that it operates at the set times.
When the button is pressed after the timer has been set, the timer standby mark ("⑨") appears on the display. Press again to turn the mark off.
The timer will not operate when the "⑨" mark is off.
- ⑪ **MEMO ENT/NEXT button**
This button is used to preset AM and FM stations and when setting the timer.
- ⑫ **Display**

TUNER DISPLAY



4 CONNECTIONS

NOTE:

This system includes digital circuitry which may cause interference such as color blotching or changes in the color on TVs. If this happens, move the system and the TV as far apart as possible.

Use a record player with an MM cartridge.

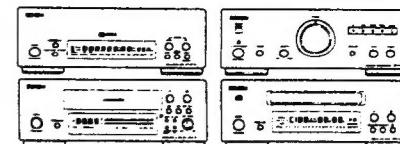
- Disconnect the ground cord if humming or noise is produced when it is connected.

- For instructions on connection and operation of an optional MD player, refer to the MD player's operating instructions.

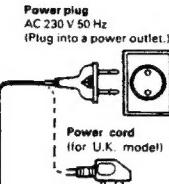


Connecting the speaker systems
Connect the speaker system for the left channel (the left side as seen from the front) to the "L" terminals, the speaker system for the right channel to the "R" terminals. Be sure to use speaker systems with an impedance of 4 ohm or greater.

CAUTION:
Whenever the power switch is in the STANDBY position, the unit is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.



Side by side installation

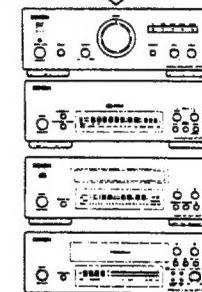


Power plug
AC 230 V 50 Hz
(Plug into a power outlet.)



Tuner (TU-10)

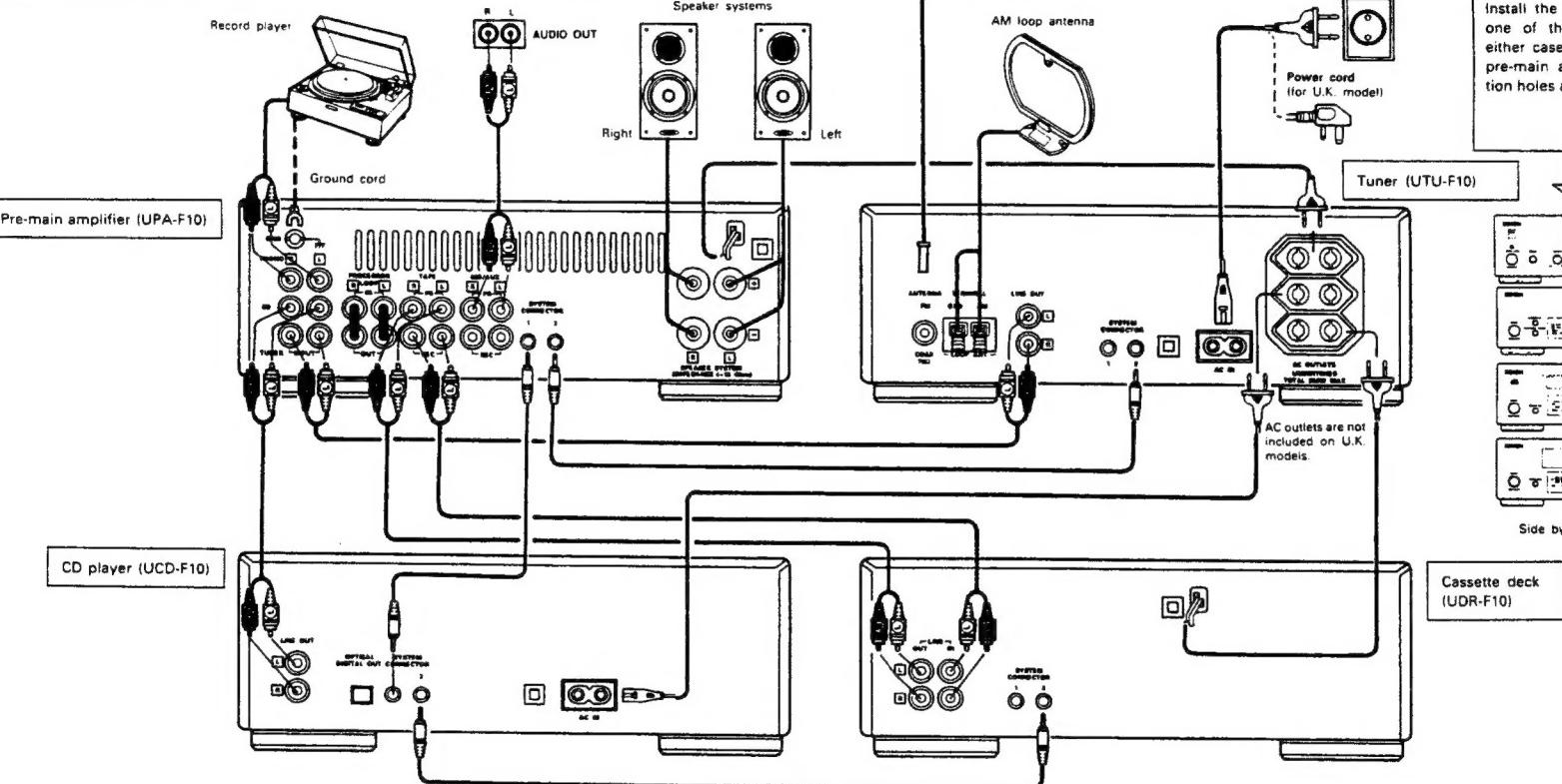
Install the sets as shown in one of these diagrams. In either case, be sure that the pre-main amplifier's ventilation holes are not obstructed.



Side by side installation

Pre-main amplifier (UPA-F10)

CD player (UCD-F10)



Cassette deck
(UDR-F10)

System operations

Such system operations as the timer and the auto on functions, as well as remote control operations cannot be performed unless all the RCA pin-plug cords and system connector cords are connected between the units, so be sure to make all the connections properly as shown in the diagram. Also, disconnecting system connectors while the system is operating may result in malfunction. Be sure to turn unplug the power cord before changing connections.

OPTICAL DIGITAL OUT jack

Digital data is output in optical form from this jack.

PROCESSOR LOOP jacks

The PROCESSOR LOOP jacks on the UPA-F10 are interconnected with short-circuiting pins. Only remove these pins when using these jacks for connection to another component.

NOTES:

- Do not plug the power cord into the power outlet until all connections are completed. Be sure to interconnect the channels (L to L (white) and R to R (red)) properly, as shown on the diagram.
- Insert the plugs securely. Incomplete connections may result in noise.
- Be sure to connect the speaker cords between the speaker terminals and the speaker systems with the same polarities (+ to +, - to -). If the polarities are switched, the sound at the center will be weak, the position of the different instruments will be unclear, and the stereo effect will be lost.
- After unplugging the power cord, wait about 5 seconds before plugging it back in.
- Note that setting the connection cords (pin-plug cords) next to the power cords may result in humming or other noise.

CD PLAYER

- ① Disc tray
Load discs here.
- ② ▶ (play) button
Press this button to start playing the disc.
Even when the disc tray is open, the disc tray closes and playback begins when this button is pressed.
When pressed in the standby mode, the power automatically turns on and playback begins. (Auto on function)
- ③ ■ (stop) button
Press this button to stop playback.
- ④ POWER switch
Press this once to turn the CD player's power on, then press again to set the CD player to the standby mode.
In the standby mode, "OFF" appears on the display.
- ⑤ OPEN/CLOSE button
Press this to open and close the disc tray.
When pressed once, the disc tray opens out, and when pressed again, the disc tray closes. If a disc is loaded, the total number of tracks and total playing time of the disc are displayed several seconds after the disc tray is closed.
When pressed in the standby mode, the CD player's power turns on.
- ⑥ Display
- ⑦ ▲▲ / ▼▼ (automatic/manual search reverse) button
Use this to move to the beginning of a specific track.
When pressed during playback or in the pause mode, the pickup moves backward a number of tracks equal to the number of times the button is pressed.
- ⑧ ▶▶ / ▶▶ (automatic/manual search forward) button
Use this to move to the beginning of a specific track.
When pressed during playback or in the pause mode, the pickup moves forward a number of tracks equal to the number of times the button is pressed.
• The automatic search mode is set if the ⑦ or ⑧ button is released within 0.5 seconds, and the manual search mode is set if the button is held for over 0.5 seconds.
- ⑨ ▶(pause) button
Press this button to stop playback temporarily.
Press the play button to cancel the pause mode and resume playback.

CD PLAYER DISPLAY

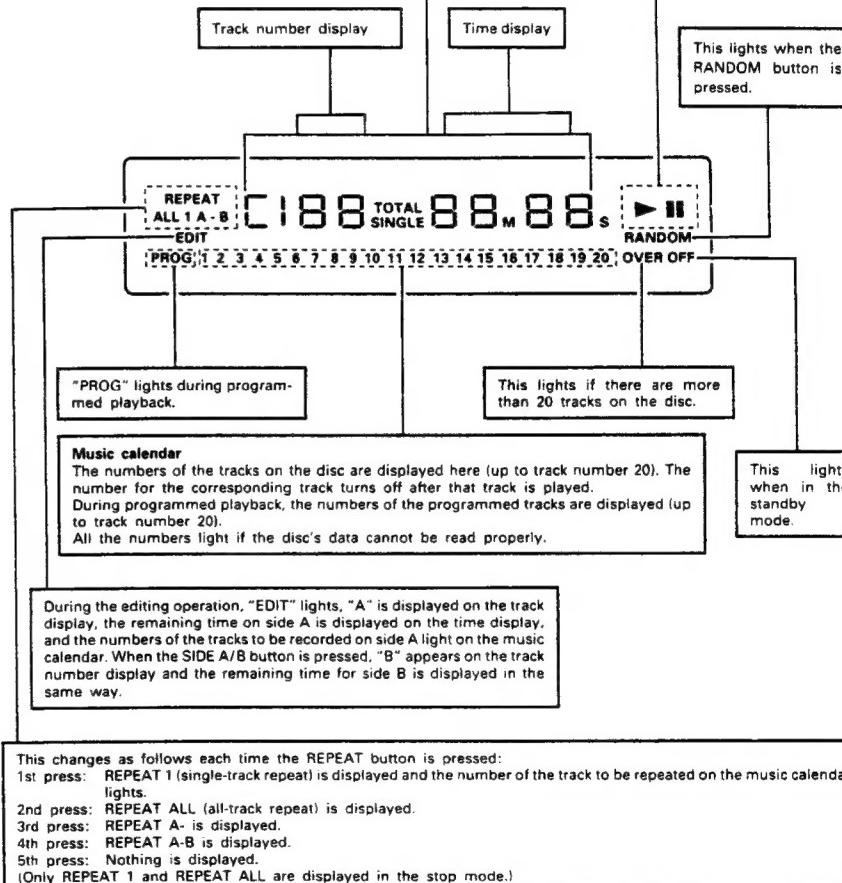
The following is displayed on the track number display:

- When the disc's data cannot be read properly 00
- In the stop mode Total number of tracks
- In the play and program modes Track number
- When the innermost or outermost section of the disc is reached during the manual search operation CC or CC

The following is displayed on the time display:

- When the disc's data cannot be read properly 00 00
- In the stop mode Total playing time
- In the play and pause modes Elapsed time for current track
- In the program mode Elapsed time of programmed tracks

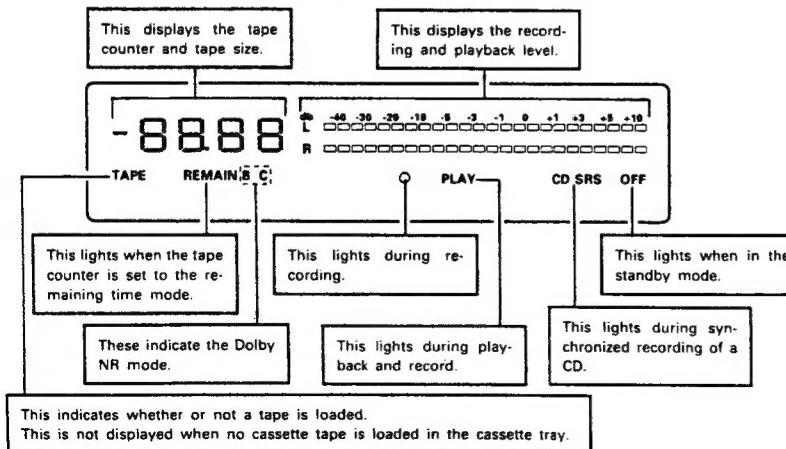
▶ (the play indicator) lights when a disc is playing, and II (the pause indicator) lights when the pause mode is set.



CASSETTE DECK

- 1 Cassette tray**
The cassette tray opens out when the OPEN/CLOSE button is pressed. Load the cassette tape with the side on which the tape is exposed facing away from you. To close the cassette tray, press the OPEN/CLOSE button again. For details, refer to Page 16.
 - 2 << (rewind) button**
Press this button to rewind the tape.
Press this button during playback to set the music search mode.
 - 3 ▶ (play) button**
Press this button to start playback.
When pressed in the standby mode, the power of both the cassette deck and the pre-main amplifier turns on automatically and playback starts. (Auto on function)
 - 4 ►► (fast-forward) button**
Press this button to fast-forward the tape.
Press this button during playback to set the music search mode.
 - 5 ■ (stop) button**
Press this button while the tape is moving to stop the tape.
 - 6 EDIT RELAY button**
The cassette tray opens when all the tracks for side A of the tape have been recorded with the CD editor recording function. To continue recording on side B, turn the tape over then press this button to close the cassette tray and start recording.
 - 7 POWER switch**
Press this once to turn the cassette deck's power on, then press again to set the cassette deck to the standby mode. In the standby mode, "OFF" appears on the display.
 - 8 OPEN/CLOSE button**
Press this to open and close the cassette tray.
When pressed in the standby mode, the cassette deck's power turns on.
 - 9 Display**

CASSETTE DECK DISPLAY



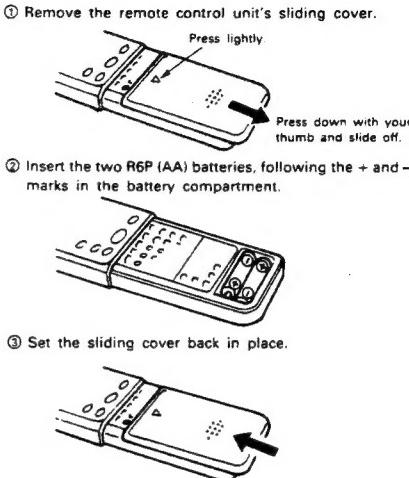
6 REMOTE CONTROL UNIT

The D-F10 comes with a system remote control unit (RC-172).

Inserting the batteries

— NOTES:

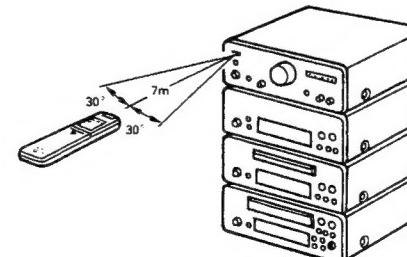
- Use R6P (AA) batteries in this remote control unit.
 - Replace the batteries with new ones approximately once each year, though this depends on how frequently the remote control unit is used.
 - Replace the batteries with new ones earlier if the remote control unit does not operate even from short distance.
 - Insert the batteries in the proper + and - directions following the marks in the battery compartment.
 - Remove the batteries when not using the remote control unit for extended periods of time.
 - To avoid damage and leakage:
 - Do not use a new battery with an old one.
 - Do not use two different types of batteries.
 - Do not short-circuit, take apart, heat or dispose of batteries in flames.
 - If the batteries should leak, carefully wipe the fluid out of the battery compartment, then insert new batteries.



Using the Remote Control Unit

— Cautions on Use

- The remote control unit may not operate if the remote sensor is exposed to direct sunlight or the strong light from a lighting fixture, or if there is an obstacle between the remote control unit and the remote sensor.
 - Do not press buttons on the remote control unit and on the set at the same time. Doing so could result in malfunction.
 - If the remote control unit is pointed away from the remote sensor during continuous operations (such as when turning the volume up or down), the operation will stop. If this happens, point the remote control unit at the remote sensor and press the button again.



- The remote sensor is located on the pre-main amplifier. Point the remote control unit at the remote sensor as shown on the diagram when operating it.

The remote control unit will operate from a direct distance of approximately 7 meters, but this distance will be shortened if obstacles are present or if operated at an angle.

(The remote control unit will operate at an angle of up to 30° in either direction.)

Remote Control Unit Part Names and Functions

CD operation buttons

- (stop) button**
Press this button to stop playback.
- ▶ (play) button**
Press this button to start playback.
- ◀◀ and ▶▶ (auto search buttons)**
Use these buttons to search for the beginning of the desired track.

FUNCTION selector button

- Press this button to switch the input (function).
The input changes in the following order each time this button is pressed: CD, TAPE, TUNER, PHONO, MD/AUX.

TUNER button

- Press this button to switch the function to the tuner and to recall preset stations from the remote control unit using the number buttons.

Number buttons

- Press these buttons after pressing the TUNER button to recall preset stations.
When playing a CD, press these buttons after pressing the DIRECT or PROGRAM button to specify the desired track.

With this remote control unit, only the most frequently used keys are located on the front. The remaining keys are enclosed under a sliding cover.
To use the buttons under the sliding cover, press lightly on the ▽ mark then press on the ■■■ part with your thumb and slide the cover down, as shown on the diagram on the previous page.

PRESET buttons

- Use these buttons to recall preset stations on the tuner.

Cassette deck operation buttons

- (stop) button**
Press this button to stop the tape.
- ▶ (play) button**
Press this button to start playback or recording.
- ◀ button**
This button does not function.

POWER switch

- Use this switch to turn on the power of the entire system or set the power to the standby mode.

VOLUME buttons

- Use these to adjust the volume. The volume increases when the ▲ button is pressed and decreases when the ▼ button is pressed.

BAND (AM/FM) selector button

TUNING buttons

MEMO button

SLEEP button

- Press this button to set the sleep timer.

RDS button

- Use this button to automatically tune to stations using the radio data system.

RDS → PTY → TP

PTY button

- Press this button after selecting "PTY" with the RDS button to select one of the 15 program types.

CT button

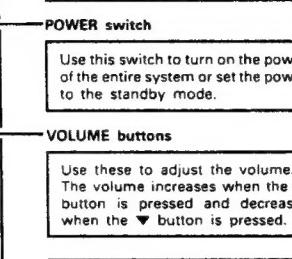
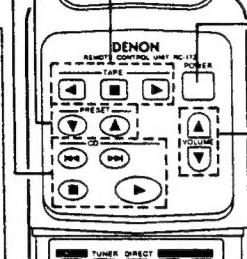
- Use this to correct the time of the clock on the UTU-F10. Press this button when the time service of an RDS station is being properly received.

"CT" and "TIME" are displayed for 2 seconds and the UTU-F10's clock is corrected. "NO CT" is displayed if the RDS station does not offer a time service and when the broadcast is not being received properly.

PANEL button

- Press this button when receiving RDS stations to select the frequency, PS or PTY display.

Note that this button will not function if the reception is poor.



Cassette deck operation buttons

- REC/REC MUTE button**
To start recording from the stop mode, press this button, then press ▶.

When this button is pressed, a blank section of approximately 5 seconds is created, after which the recording standby mode is set.

◀◀ (rewind) button

- Press this button to rewind the tape. Press this button during playback to set the music search mode (to find the beginning of selections).

▶▶ (fast-forward) button

- Press this button to fast-forward the tape. Press this button during playback to set the music search mode (to find the beginning of selections).

RESET button

- Press this button to reset the tape counter to "00.00".

REMAIN button

- Press this button to display the tape's remaining time on the tape counter.

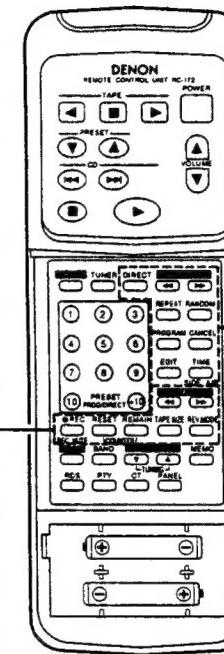
TAPE SIZE button

- Press this button to select the tape length.

For details, refer to Page 17.

REV. MODE button

This button does not function.



CD player operation buttons

- DIRECT button**
Press this button for direct search on the CD player.

◀◀ and ▶▶ (manual search) buttons
Press these buttons during playback to move quickly forward or backward.

REPEAT button

- Press this button for repeat playback.

RANDOM button

- Press this button to play the tracks in random order.

PROGRAM button

- Press this button for programmed playback on the CD player.

CANCEL button

- Press this button to clear the last track from the program.

EDIT button

- Press this button for edited recording on a tape, dividing the tracks onto sides A and B according to the length of the tape.

TIME/SIDE A/B button

- TIME**
Press this button during the play or pause mode to switch the time display.

Normally the elapsed time for the track currently playing is displayed. When this button is pressed, the display switches to the remaining time for that track ("SINGLE" lights), the total remaining time on the disc ("TOTAL" lights), then back to the elapsed time per track.

During programmed playback, the total remaining time display indicates the total remaining time of the programmed tracks.

SIDE A/B

- Press this button during the editing operation to switch the display between sides A and B of the tape.

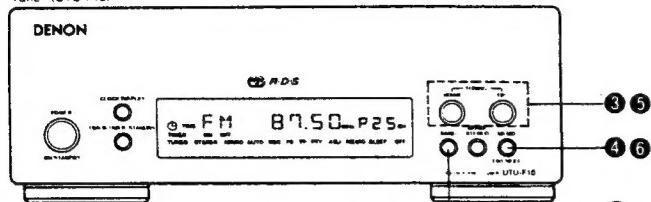
* The TIME/SIDE A/B button functions as the SIDE A/B button when it is pressed after the EDIT button is pressed and the tracks have been divided between sides A and B and before the play or pause button is pressed (before the recording mode is set).

The TIME/SIDE A/B button functions as the TIME button when it is pressed during the play, pause, or edited recording modes.

7 LISTENING TO RADIO PROGRAMS

(Check the connections on Pages 4 and 5.)

TUNING



Example: Tuning in FM 87.50 MHz
(AM stations are tuned in using the same procedure.)

1 Set the VOLUME control on the pre-main amplifier to the minimum position, then press the SYSTEM POWER switch to turn on the power.		
2 Press the BAND button on the tuner to select the FM band.		FM 90.00
3 Use the TUNING UP and DOWN buttons to tune the frequency to 87.50. Once the frequency is tuned in, adjust the volume to the desired level using the VOLUME control.		This lights when a station is tuned in. FM 87.50

Auto Tuning

- When one of the TUNING buttons is pressed, the frequency changes in steps of 50kHz in the FM band, 9kHz in the AM band.
- If one of the TUNING buttons is held in for over 1 second, the frequency continues to change when the button is released (auto tuning) and stops when a station is tuned in. Tuning will not stop at stations whose reception is poor.
- To stop the auto tuning function, press the UP or DOWN button once.

Presetting AM and FM Stations

Example: Presetting FM 87.50 (currently tuned in) at preset number 3

4 Press the MEMO ENT/NEXT button. The [MEMO] indicator flashes for 10 seconds.		Flashes FM 87.50 P TUNED STEREO AUTO
5 Use the UP and DOWN buttons to call out the number at which you want to preset the station (3), or simply press the corresponding number button ③ on the remote control unit.		"P" flashes FM 87.50 P 3 Flashes
6 Press the MEMO ENT/NEXT button while the [MEMO] indicator is flashing.		"P3" lights FM 87.50 P 3

Up to 30 AM or FM stations can be preset using this procedure.

NOTES:

- In addition to the reception frequency, the reception mode (monaural or auto) is also preset, so check the display when presetting stations.
- If a station is preset at a number where a station is already preset, the previous station is replaced with the new station.
- The preset memory is not cleared immediately when the power cord is unplugged, but is cleared if the cord is left unplugged for an extended period of time. If this happens, preset the stations again.

Listening to Preset Stations

The preset stations can be recalled using the number buttons on the remote control unit. Also, if the following operation is performed when the system power is off, the power automatically turns on and the radio is played. (Auto on function)

Example: Listening to the station preset at number 3
(This operation is only possible from the remote control unit.)

1 Press the TUNER button on the remote control unit.		FM 87.50 P 3
2 Press button "3" on the remote control unit.		

Using the RDS functions

Receiving RDS broadcasts (FM only)

1 Press the BAND button and set the FM band.		FM 87.50
2 Press the RDS button once.		FM 87.50 RDS Flashes "RDS" blinks
3 Press the AUTO TUNING UP or DOWN button.		FM 87.50 RDS Flashes "RDS" displayed
4 The station is tuned in.		FM 87.50 RDS Flashes "RDS" lights after 5 seconds of flashing Once the station is tuned in, "RDS" flashes for 5 seconds and the program service name is displayed.

NOTE: If no RDS station is found, "NO PROG" is displayed.

PTY Search

1	Press the RDS button twice.		
2	Press the PTY button to select the type of program. (One of the 15 types listed below can be selected.)		
3	Press the AUTO TUNING UP or DOWN button.		
4	The station is tuned in.		

Once the station is tuned in, "RDS" and "PTY" flash for 5 seconds and the program service name is displayed.

NOTE: If no program of the specified type is found, "NO PROG" is displayed.

TP Search

1	Press the RDS button 3 times.		
2	Press the UP or DOWN button of AUTO TUNING.		
3	Broadcast reception.		

Once the station is tuned in, "TP" and "RDS" light and the program service name is displayed.

NOTE: "NO PROG" is displayed when there is no traffic information broadcast station.

Receiving FM programs in stereo

- Press the MONO/STEREO button to turn on the "AUTO" indicator. When a program being broadcast in stereo is received, the "STEREO" indicator lights and the program is received in stereo.
- If reception is poor and there is much noise in the stereo signals, press the MONO/STEREO button to set the monaural mode.

NOTE:

- A humming sound may be heard when using a TV nearby while receiving AM programs. If this happens, move the system as far from the TV as possible.

Programs

NEWS	(News)	VARIETY	(Varied)
AFFAIRS	(Current Affairs)	POP M	(Pop Music)
INFO	(Information)	ROCK M	(Rock Music)
SPORT	(Sport)	MOR M	(M.O.R. Music)
EDUCATE	(Education)	LIGHT M	(Light Classics)
DRAMA	(Drama)	CLASSICS	(Serious Classics)
CULTURE	(Culture)	OTHER M	(Other Music)
SCIENCE	(Science)		

8 USING THE TIMER

The time and timer functions are incorporated in the tuner.

Timer Settings

■ Types of timer operations

- TIMER : Use this to turn the power on and off at the same times every day.
- SLEEP TIMER : Use this to set the power to turn off after 10 to 60 minutes, in steps of 10 minutes (operated from the remote control unit).

■ Notes on timer settings

- Be sure to set the current time beforehand.
- To listen to or record a radio program ("air check") using the timer, be sure to preset the station beforehand. (Refer to "Presetting AM and FM Stations" on Page 10.)

Power Failures

Should there be a power failure or should the power cord be unplugged, the time display will flash at "00:00". If this happens, reset the current time.

Also check the timer and tuner presettings, and reset them if they have been cleared.

Checking the Settings

To check the timer settings, press the TIMER/TIMER STANDBY button for at least 3 seconds. (This can also be done when the tuner's power is off.) Next, press the ENTER/NEXT button repeatedly to display the timer start mode, the reception band and preset channel number when in the tuner mode, the on time and the off time. Press the ENTER/NEXT button once more to return to the current mode display.

Changing the Settings

Repeat the timer setting operation to erase the previous settings and set the new settings.

Clearing the Settings

Press the TIMER/TIMER STANDBY button for at least 3 seconds, then press it again while "FUNC" is displayed to clear the timer settings.

Note on Setting the Timer

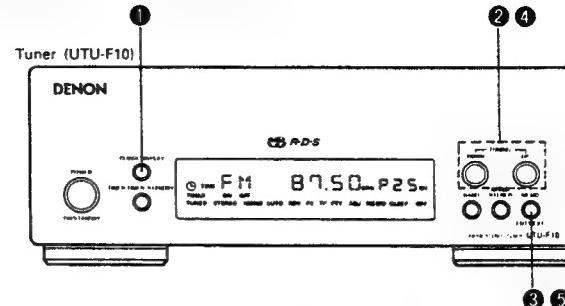
If the time set with the timer is reached while the system power is on, the operation switches to the operation set by the timer.

Turning the Timer Off

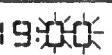
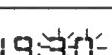
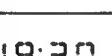
Press the TIMER/TIMER STANDBY button to turn the  mark off.

Setting the Current Time

The time is displayed in the 24-hour mode.



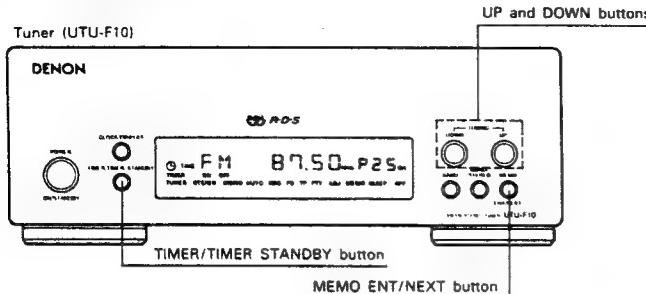
Example: Setting to 19:30 (7:30 p.m.)

1	Press the CLOCK/DISPLAY button for at least 3 seconds.		 The hours place flashes. (If the hours have already been set, that number flashes.)
2	Use the UP and DOWN buttons to set the hours.	 	 The hours place flashes.
3	Press the MEMO ENT/NEXT button.		 The minutes place flashes. (If the minutes have already been set, that number flashes.)
4	Use the UP and DOWN buttons to set the minutes.	 	 The minutes place flashes.
5	Press the MEMO ENT/NEXT button at the sound of a time service's chime. The time display stops flashing and the clock starts running.		 The display stops flashing and the clock starts running from 00 seconds.

- The current time can be set even when the power is off.
- If an RDS station offers a time service, the time can be set by pressing the CT button on the remote control unit while that station is tuned in.

Setting the Timer

The power can be set to turn on and off every day at the same time in any of five modes: tuner, CD, cassette deck, MD player (optional) and air check (recording from the radio). (Preset the AM or FM station beforehand.)



Example: Setting the tuner to turn on at 12:35, off at 12:56 (with FM 87.50 MHz preset at channel "3")

1	Press the SYSTEM POWER switch on the pre-main amplifier to turn on the system's power.		 Say that FM 90.00 MHz is tuned in at preset channel number "1"
2	Press the TIMER/TIMER STANDBY button for at least 3 seconds to set the timer setting mode.		
3	Use the UP and DOWN buttons to set the "TUNER" mode.		
4	Press the MEMO ENT/NEXT button.		 Flashes
5	Use the UP and DOWN buttons to set the preset channel number.		 Flashes
6	Press the MEMO ENT/NEXT button.		 If the mark is displayed after the TIMER/TIMER STANDBY button is pressed, the timer will operate at the same times every day. To turn the timer off, press the TIMER/TIMER STANDBY button again to turn the mark off. Flashes
7	Use the UP and DOWN buttons to set the hours for the timer on time.		 Flashes

8	Press the MEMO ENT/NEXT button.		 Flashes (If the timer has already been set, that number flashes.)
9	Use the UP and DOWN buttons to set the minutes for the timer on time.		 Flashes
10	Press the MEMO ENT/NEXT button.		 Flashes
11	Use the UP and DOWN buttons to set the hours for the timer off time.		 Flashes
12	Press the MEMO ENT/NEXT button.		 Flashes (If the timer has already been set, that number flashes.)
13	Use the UP and DOWN buttons to set the minutes for the timer off time.		 Flashes (If the timer has already been set, that number flashes.)
14	Press the MEMO ENT/NEXT button.		 The display returns to as it was before the timer setting mode was set.
15	Press the TIMER/TIMER STANDBY button.		 FM 90.00 P 1
16	Press the SYSTEM POWER switch on the pre-main amplifier to turn off the system's power.		

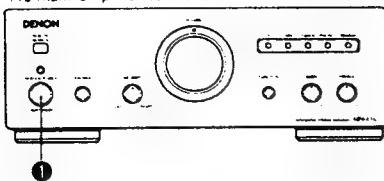
If the mark is displayed after the TIMER/TIMER STANDBY button is pressed, the timer will operate at the same times every day. To turn the timer off, press the TIMER/TIMER STANDBY button again to turn the mark off.

NOTES:

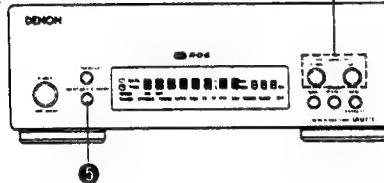
- The standby mark ("") will not light if the current time is not set. If this is the case, set the current time, then press the TIMER/TIMER STANDBY button.
- When an optional mini-disc (MD) player is connected, it can be operated with the timer. For instructions, refer to the MD player's operating instructions.

Various Timer Operations

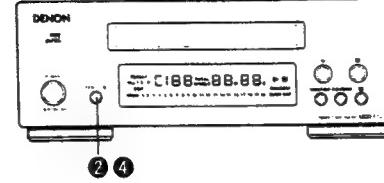
Pre-main amplifier (UPA-F10)



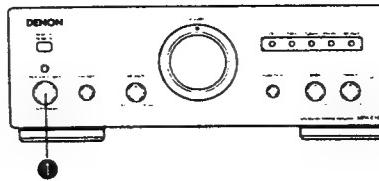
Tuner (UTU-F10)



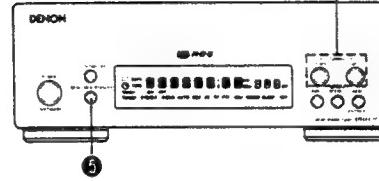
CD player (UCD-F10)



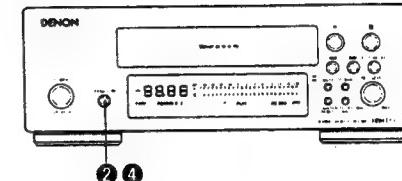
Pre-main amplifier (UPA-F10)



Tuner (UTU-F10)



Cassette deck (UDR-F10)



Example 1: Playing a compact disc with the timer

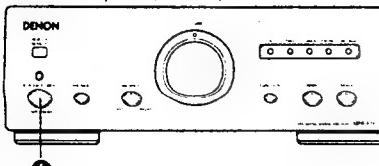
1	Press the SYSTEM POWER switch on the pre-main amplifier to turn on the system's power.	SYSTEM POWER	
2	Press the CD player's OPEN/CLOSE button to open the disc tray.	OPENCLOSE	
3	Load the disc in the disc tray. Refer to Page 20.		
4	Press the CD player's OPEN/CLOSE button again to close the disc tray.	OPENCLOSE	
5	Press the tuner's TIMER/TIMER STANDBY button for at least 3 seconds.	TIMER/TIMER STANDBY	FUNC
6	Use the tuner's UP and DOWN buttons to set the "CD" mode.	DOWN TUNING UP	
7	Now follow steps 6 to 16 under "Setting the Timer" on Page 13.		

Example 2: Playing a cassette tape with the timer

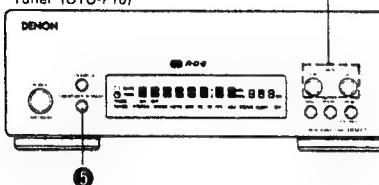
1	Press the SYSTEM POWER switch on the pre-main amplifier to turn on the system's power.	SYSTEM POWER	
2	Press the cassette deck's OPEN/CLOSE button to open the cassette tray.	OPENCLOSE	
3	Load the cassette tape in the cassette tray. Refer to Page 16.		
4	Press the cassette deck's OPEN/CLOSE button again to close the cassette tray.	OPENCLOSE	
5	Press the tuner's TIMER/TIMER STANDBY button for at least 3 seconds.	TIMER/TIMER STANDBY	FUNC
6	Use the tuner's UP and DOWN buttons to set the "TAPE" mode.	DOWN TUNING UP	
7	Now follow steps 6 to 16 under "Setting the Timer" on Page 13.		

• Check that the cassette deck is set to the desired Dolby NR mode.

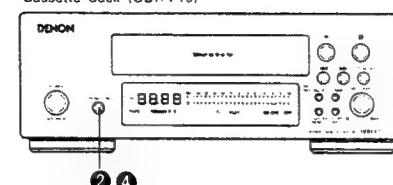
Pre-main amplifier (UPA-F10)



Tuner (TU-TU-F10)



Cassette deck (UDR-F10)



Example 3: Unattended recording of radio programs ("air check")

1	Press the SYSTEM POWER switch on the pre-main amplifier to turn on the system's power.		
2	Press the cassette deck's OPEN/CLOSE button to open the cassette tray.		
3	Load the cassette tape in the cassette tray. Refer to Page 16.		
4	Press the cassette deck's OPEN/CLOSE button again to close the cassette tray.		• For the Dolby NR setting, refer to 2 on Page 19.
5	Press the tuner's TIMER/TIMER STANDBY button for at least 3 seconds.		FUNC
6	Use the tuner's UP and DOWN buttons to set the "AIRCH" mode.		AIRCH
7	Now follow steps 4 to 16 under "Setting the Timer" on Page 13.		

- Recording is not possible on the leader tape at the beginning of the cassette tape, so to avoid missing any of the program, we recommend setting the timer to approximately 1 minute before the program is scheduled to start.
- When an optional mini-disc (MD) player is connected, radio programs can be recorded using the timer. For instructions, refer to the MD player's operating instructions.

Setting the Sleep Timer

With this function, the power can be set to turn off after 10 to 60 minutes, in steps of 10 minutes, using the remote control unit.

Example: Setting the power to turn off in 50 minutes
(This operation is only possible from the remote control unit.)

1	Tuner currently set to FM 87.50 MHz	
2	Press the SLEEP button.	
3	Press the SLEEP button again while the "SLEEP" indicator is flashing.	
4	The previous display reappears after 5 seconds. The "SLEEP" indicator remains lit, indicating that the sleep timer is functioning.	

• The time is reset to "60" (60 minutes) if the SLEEP button is pressed again while the sleep timer is functioning.

Cancelling the Sleep Timer

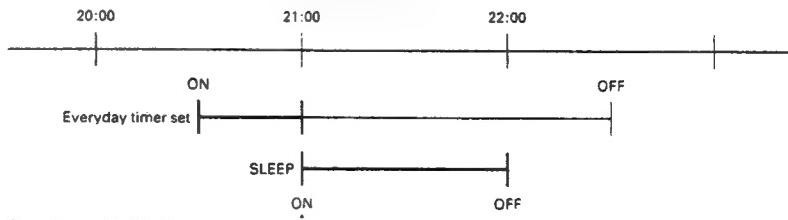
Press the SLEEP button repeatedly until the "SLEEP" indicator turns off.
The sleep timer is also cancelled if the amplifier's SYSTEM POWER switch or the POWER switch on the remote control unit is pressed, turning the system power off.

NOTE:

• If the times set with the sleep and everyday timers overlap, the sleep timer has priority.

Order of priority of the sleep and everyday timers

The sleep timer has priority for the off time. (The system operates as indicated by the bold lines.)



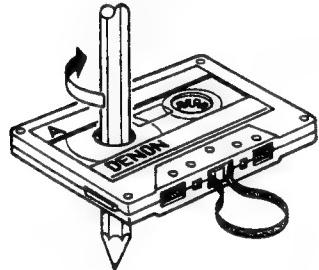
Even when the power was turned on with the timer, the power turns off if the remaining time of the sleep timer reaches "00" before the off time set with the everyday timer is reached. If the everyday timer's on time is reached while the sleep timer is functioning, the everyday timer does not function.

9 BEFORE RECORDING AND PLAYING TAPES

About Cassette Tapes

■ Cautions on handling cassette tapes

- C-120 cassette tapes
C-120 (120-minute) cassettes use very thin tape which can easily get caught on the capstans and pinch rollers. We recommend not using C-120 tapes.
- Tape slack
If the tape is slack, it may get caught in the mechanism and damaged. Take up any slack in the tape with a pencil, etc., before loading the cassette.



■ Preventing accidental erasure

- Cassette tapes have tabs for preventing accidental erasure. Use a screwdriver, etc., to break off the tabs to prevent recordings from being accidentally erased.
- To record on a tape whose tabs have been broken, place a piece of cellophane tape, etc., over the tab holes.



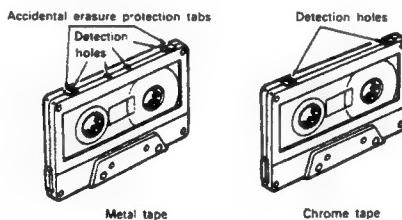
■ Notes on storing cassette tapes

- Avoid placing cassette tapes in the following types of places:
 - Hot or humid places
 - Dusty places
 - Places exposed to direct sunlight
 - Near magnetic sources (TVs, speakers, etc.)
- Store cassette tapes in cases with stoppers to prevent the tape from getting slack.

Auto Tape Selector Mechanism

The D-F10 is equipped with an auto tape selector mechanism which uses the detection holes in the cassette halves to detect the type of tape and automatically set the most appropriate recording bias and equalization for that type of tape.

- Do not use ferrichrome tapes.
- When an old metal tape with no detection holes is used, the treble will be stressed excessively, so use metal tapes with detection holes.



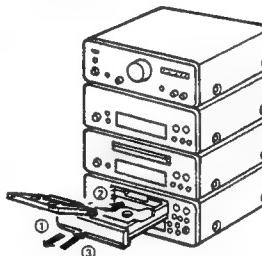
Loading and Unloading Cassette Tape

NOTE:

- Load cassette tapes with the side on which the tape is exposed facing the set. Loading them the other way may result in damage.

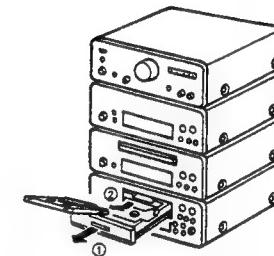
■ Loading

- ① Press the OPEN/CLOSE button. The cassette tray opens.
- ② Load the cassette tape in the cassette tray as shown on the diagram below, with the side on which the tape is exposed facing inside.
- ③ Press the OPEN/CLOSE button to close the cassette tray.



■ Unloading

- ① Press the OPEN/CLOSE button. The cassette tray opens.
- ② Remove the tape.



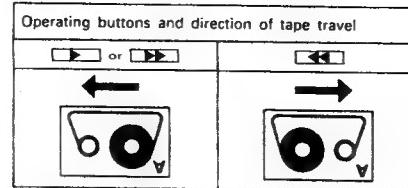
Check the following before recording or playing cassette tapes:

1. Are the heads dirty? The sound quality will be poor if the heads are dirty.
Refer to Page 25.
2. Are the accidental erasure protection tabs broken off? Recording is not possible if the accidental erasure protection tabs on the top of the cassette are broken off. Refer to Page 16.

Direction of Tape Playback

The relationship between the operating buttons on the D-F10 and the direction of tape travel is as shown on the diagram at the right.

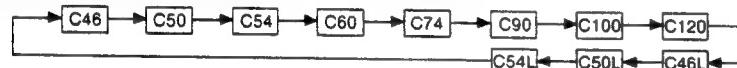
The side facing the top when the cassette tape is loaded in the cassette tray is played or recorded.



Using the Tape Counter

1. Tape size selector

- When using the tape counter, be sure to set the size of the tape being used.
- Press the TAPE SIZE button on the remote control unit to display the tape size, then press the button again to select the desired tape size. The display changes as follows each time the button is pressed:



- "C46L", "C50L" and "C54L" are for tapes with large hubs.
- Tape sizes other than the ones indicated above cannot be set.

2. Tape counter

The D-F10's tape counter includes the two modes described below.

The mode switches as follows each time the REMAIN button on the remote control unit is pressed:



The mode can be changed whether the tape is stopped or moving.

(1) Linear mode

- This indicates the tape's elapsed time in minutes and seconds.

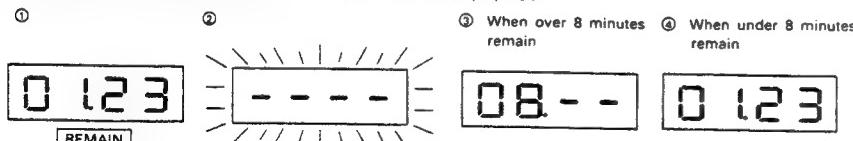
5959
(minutes) (seconds)

- The counter is reset to "00.00" when a new tape is loaded and when the RESET button is pressed.
- If you make notes on the number on the counter and the recorded content while recording or playing tapes, these notes can be used to easily find the section you want to play or record.

(2) Remaining time mode

- This indicates the remaining time on the tape.

When this mode is selected, "REMAIN" appears on the display (①).



- "- - - -" (②) flashes for approximately 10 seconds after the tape is started while the remaining time is being calculated. After this, only the minutes are displayed if there are more than 8 minutes remaining (③), and both the minutes and seconds are displayed if there are less than 8 minutes remaining (④).
- "- - - -" flashes on the display during the fast-forward and rewind operations.

3. Tape end warning

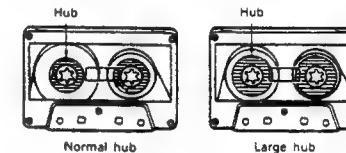
This "REMAIN" indicator starts flashing to indicate that there is little time remaining on the tape during recording or playback. (There may be a major error in the time at which the "REMAIN" indicator starts flashing if the actual tape and the tape size selector setting do not match, so be sure to set the proper tape size for the tape being used.)

- The "REMAIN" indicator flashes starts approximately 5 minutes before the end of the tape when the counter is set to the linear mode. Press the REMAIN button on the remote control unit as necessary to switch the counter to the remaining time mode to check the remaining time.
- The "REMAIN" indicator remains lit without flashing when the remaining time mode is set.
- The tape end warning is only a rough indicator, and differs according to the thickness of the tape's hubs and the thickness of the tape. In some cases, it may not function.

NOTE:

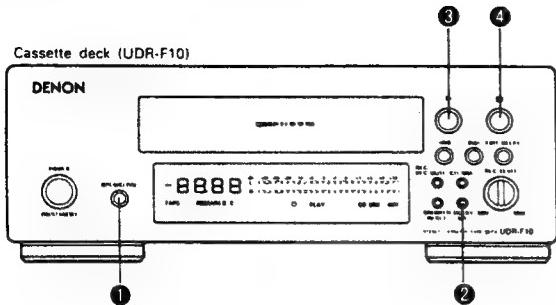
The D-F10's tape counter and tape end warning are set for use with C46, C50, C54, C60, C74, C90, C100, C120, C46L, C50L or C54L cassette tapes ("L" indicates tapes with large hubs), so they may be off when using tapes of other sizes or when the tape size setting is not the same as the size of the tape being used. When using tapes of other sizes, select the nearest tape size to minimize the error.

The tape counter is not as accurate as a clock, and may be slightly different from the actual time, since the tape thickness differs depending on the type of cassette tape (tape position and time). The counter may also be off due to differences in the hub size (small or large).



- Large hubs are hubs with a diameter of approximately 27mm. Note that there may be a major error in the remaining time display if tapes with larger hubs are used.

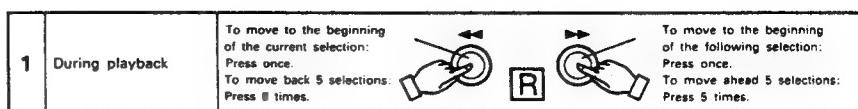
10 PLAYING CASSETTE TAPES



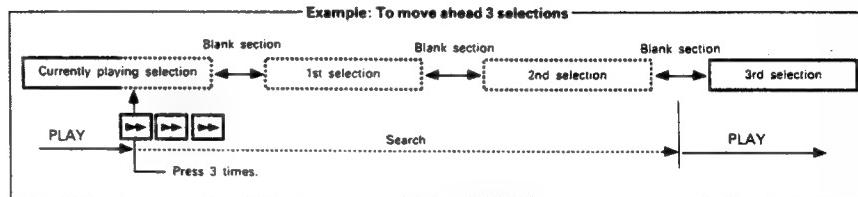
The [R] mark indicates operations which can also be performed on the remote control unit.	
1 Press the OPEN/CLOSE button and load a recorded tape in the cassette tray. Refer to Page 16.	 
2 Press the DOLBY NR button display the Dolby mode. Refer to Page 8.	 <p>The mode changes as follows each time the button is pressed: OFF → B → C</p> <p>When playing tapes recorded with Dolby NR, set the Dolby mode to the same mode (B or C) as when the tape was recorded.</p>
3 Press the play button (▶).	 <p>Playback starts.</p>
4 To stop playback, press the stop button (■).	

Using the Music Search Function (automatically finding the beginning of selections)

- Use this function to move back to the beginning of the current selection or forward to the beginning of the following selection.
- This function can also be used to skip over selections (up to 99 selections in either direction).



- To fast-forward or rewind the tape, first press the stop button (■), then press the ▶ or ◀ button.
- The music search function will only work if there are blank sections of at least 4 seconds between selections.



Music Search Display

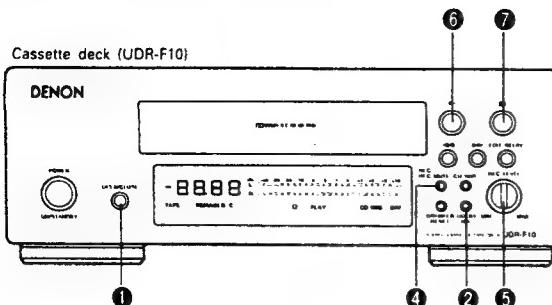
- When a selection before the current selection is specified:

P - 03 ← Number of selections to be skipped
"-" is displayed when moving back to previous selections.
- When a selection after the current selection is specified:

P 05 ← Number of selections to be skipped

During the music search function, the number of selections to be skipped is displayed on the tape counter, and decreases each time a blank section is detected. (For example, P03 → P02 → P01 when moving 3 selections ahead.) The tape counter reappears when the operation is completed.

11 RECORDING CASSETTE TAPES



- Before recording on a cassette tape, check that its accidental erasure protection tabs are intact. Recording is not possible if the tabs are broken off.
- The positions of the VOLUME, TREBLE and BASS controls on the pre-main amplifier do not affect the recording.

The [R] mark indicates operations which can also be performed on the remote control unit.

1	Press the OPEN/CLOSE button and load the tape onto which you want to record in the cassette tray. Refer to Page 16.	
2	Press the DOLBY NR button to display the Dolby mode. Refer to Page 8.	 The mode changes as follows each time the button is pressed: OFF → B → C To record in Dolby NR, set to "B" or "C"

	To record the radio	To record from the component connected to the AUX terminals	To record a CD
3	Press the tuner's BAND selector button.	Press the FUNCTION button on the pre-main amplifier to select "MD/AUX".	Load the disc in the CD player. Refer to Page 20.
	Tune in the station to be recorded. Refer to Page 10.	Starting playback on the MD player, video deck or LD player.	Press the CD player's play button to start playback.
4	Press the REC/REC MUTE button.		The recording pause mode is set and the recording indicator (●) appears on the display.
5	Adjust the recording level.		The recording level of the source being played is displayed on the level meter. Use the REC LEVEL control to adjust the recording level. (Refer to "Adjusting the REC LEVEL Control" below.)
6	Press the play button (▶). (Recording starts.)		<ul style="list-style-type: none"> For synchronized recording of CDs "CD SRS" appears on the display. (Recording starts.) * When the CD SRS button is pressed, a blank section of 9 seconds is automatically created on the tape before actual recording starts.
7	To stop recording, press the stop button (■).		<ul style="list-style-type: none"> If the CD player's play button is pressed in the recording pause mode, recording of the CD begins automatically. The CD SRS function will not work if the CD player is set to the random play or program mode.

Adjusting the REC LEVEL Control

The recorded sound will be distorted if the recording level is too high, or there will be much noise if the recording level is too low. It is important to set the recording level to an appropriate setting to achieve a good quality recording.
* Watch how far the level meter lights and adjust the REC LEVEL control accordingly.

Optimum recording input level (approximate)

Type-I (normal) tapes:	Meter lights up to 0dB
Type-II (CrO_2) tapes:	Meter lights up to +1dB
Type-IV (metal) tapes:	Meter lights up to +3dB

NOTE:

The actual recording level differs depending on the source and the type of tape, so make a trial recording first to check the recording level.

12 PLAYING CDs



Only discs with the mark shown below can be played on the D-F10.

- For CDVs, only the audio part is played. (The video part is not played.)

About Compact Discs

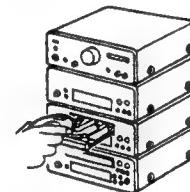
Disc	Remarks
CD	
CDV	Only the audio part is played.
CD singles (8cm discs)	

■ Removing discs from their cases

As shown on the diagram, grasp the outer edge of the disc with your fingers, insert a finger in the hole in the center, press gently, then lift the disc out of the case.



■ Loading discs in the disc tray



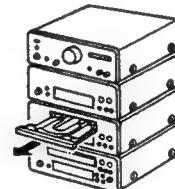
Be sure to load the disc with the labelled side facing up. (Compact discs only play on one side.) For 8cm CDs, set the disc in the sunken section in the center of the tray.

NOTES:

- The disc tray opens when the OPEN/CLOSE button is pressed once and closes when it is pressed again.
- When the disc tray is closed, the disc turns automatically for several seconds, then the total number of tracks and total playing time of that disc appear on the display.
- The disc tray can also be closed by pressing the play button (▶), in which case playback automatically starts from the first track on the disc (or if tracks are programmed, from the first programmed track).

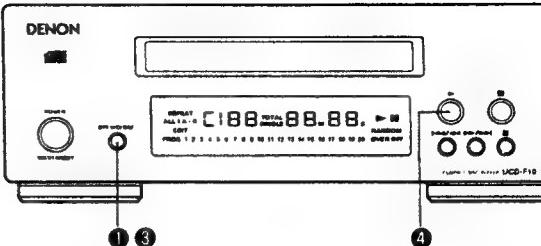
Handling the Disc Tray

Do not turn off the power, stop the disc tray by hand or pull on it when it is moving. Doing so may damage it.
If the headphones' cord or some other object accidentally gets caught in the disc tray while it is closing and the disc tray stops, press the OPEN/CLOSE button again to open the tray and remove the obstacle.
Do not set objects other than discs on the disc tray. Doing so may damage it.



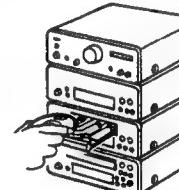
Normal Playback

CD player (UCD-F10)

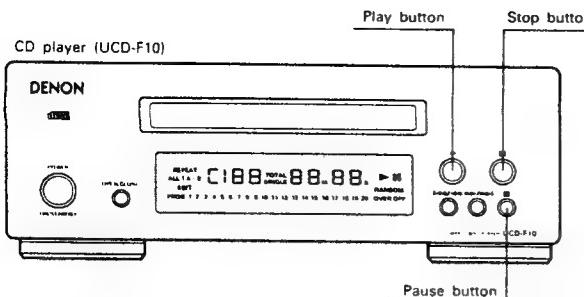


Example: Playing a disc containing 15 tracks and with a playing time of 62 minutes, 03 seconds, starting from the first track

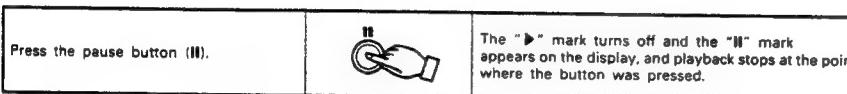
The [] mark indicates operations which can also be performed on the remote control unit.

1	Press the OPEN/CLOSE button to open the disc tray.	OPEN/CLOSE	00 00.00. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
2	Load the CD in the disc tray.		
3	Press the OPEN/CLOSE button. The disc tray closes. The display appears after several seconds.	OPEN/CLOSE	15 62.03. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
4	Press the play button (▶).	[]	01 00.01. ▶ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

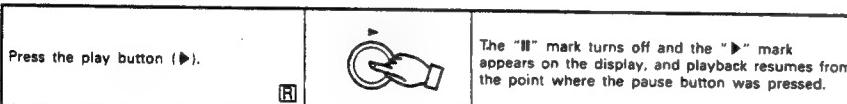
GENERAL SECTION



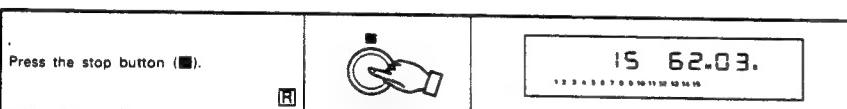
Interrupting playback temporarily



Resuming playback



Stopping playback



- When a disc is loaded, "00" is displayed on the track number display for several seconds while the data on the number of tracks and total playing time is being read from the innermost side of the disc, after which the number of tracks and total playing time appear.

NOTES:

- If no disc is loaded, if the disc is upside-down, or if the data cannot be read properly due to scratches or dirt, the display reads as shown below and the disc will not play.

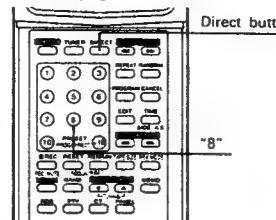
00 00.00.

Various Playback Functions

In addition to the regular playback, the D-F10 also offers the following playback functions:

① Playing a specific track

(Using the remote control unit)
Example: Playing the 8th track

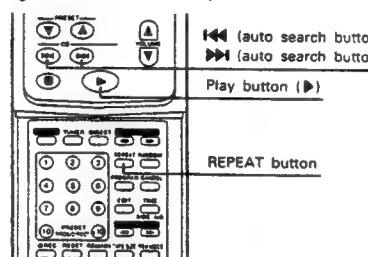


Direct Search

- Press the DIRECT button.
- Press the button corresponding to the number of the track 8. "8" appears on the track number display and playback of track number 8 begins.
- When the end of the track is reached, playback continues on the next track.
- To specify a track number of 11 or greater, say track 15, press **[+10]** then **[5]**, and to specify a track number of 20 or greater, say track 23, press **[+10]**, **[+10]** then **[3]**. To play track 20, press **[+10]** then **[0]**.

② Playing a single track repeatedly

(Using the remote control unit)

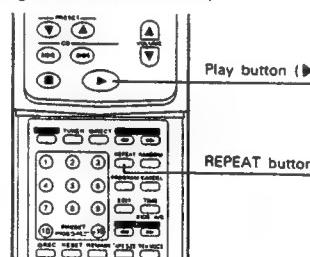


Single-track Repeat

- When the REPEAT button is pressed once, **[REPEAT]** appears on the display and the single-track repeat mode is set.
- Use the **<-->** buttons to select the track to be repeated.
- Press the play button (**▶**) to start playback.
- When the end of the specified track is reached, playback starts over from the beginning of that track.
- The single-track repeat mode can also be set by pressing the REPEAT button once during playback.
- To cancel the single-track repeat mode, press the REPEAT button repeatedly until the "REPEAT" indicator turns off.

③ Playing all the tracks repeatedly

(Using the remote control unit)



All-track Repeat

- When the REPEAT button is pressed twice, **[REPEAT ALL]** appears on the display and the all-track repeat mode is set.
- Press the play button (**▶**) to start playback.
- The all-track repeat mode can also be set by pressing the REPEAT button twice during playback.
- To cancel the all-track repeat mode, press the REPEAT button to turn the "REPEAT" indicator off.
- If the REPEAT button is pressed during programmed playback, the tracks are played repeatedly in the programmed order.

④ Playing a certain section repeatedly

A-B Repeat

Example: Using a CD containing 15 tracks

	REPEAT 03	
1st press	(1) When pressed during playback:	The single-track repeat mode is set and that track number is displayed on the music calendar.
	(2) When pressed before playback:	The single-track repeat mode is set and that track number is displayed on the music calendar. Next, ① Press the play button (▶) to play the first track repeatedly. ② If playback is started using the direct search buttons on the remote control unit or the ▶/▶/◀/◀ buttons on the CD player, the specified track is played repeatedly.
2nd press	(1) When pressed during playback:	The numbers of all the tracks on the disc are displayed on the music calendar, and the all-track repeat mode is set.
	(2) When pressed before playback:	REPEAT 03 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
3rd press	When pressed during playback:	"REPEAT" and "A" light.
4th press	When pressed during playback:	"REPEAT" and "A-B" light, and the section between points A and B is played repeatedly.
Press the REPEAT button again to return to normal playback.		

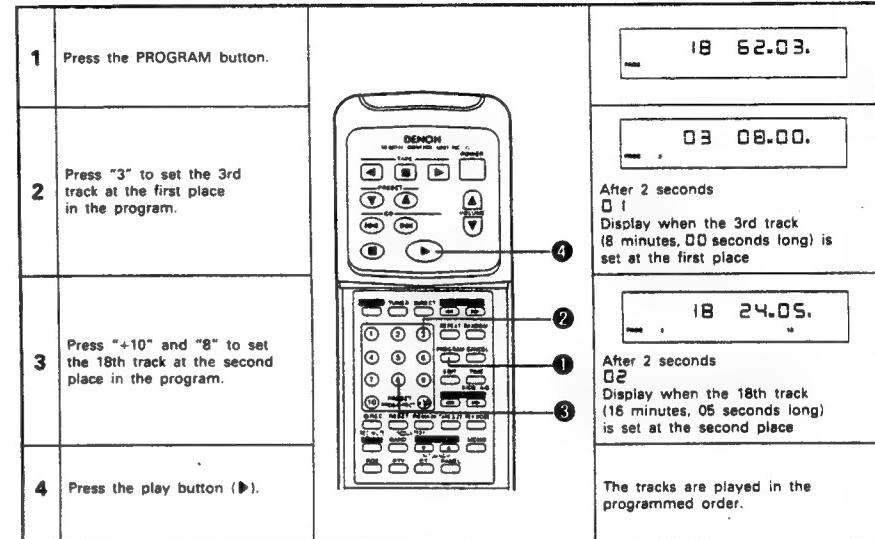
⑤ Playing the tracks in a certain order

Programmed Playback

(Using the remote control unit)

Example: Programming the 3rd track to play first, the 18th track to play second, using a CD containing 18 tracks and with a playing time of 62 minutes, 03 seconds

Procedure



Other operations possible during programmed playback:

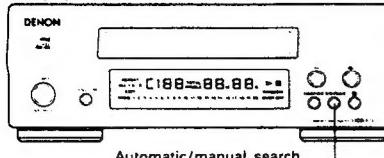
Such operations as quick search, pause and skip monitor are also possible during programmed playback. For the quick search function, press the automatic/manual search reverse button (◀◀/◀◀) to move back to the beginning of the track, then press it again while the time display reads "00.00.". To move ahead to the beginning of the next track, press the automatic/manual search forward button (▶▶/▶▶), regardless of the time display.

NOTES:

- The numbers of the programmed tracks on the music calendar turn off after the tracks have been played.
- If a track with a number of 21 is greater is programmed, the time display will read "-M-S".
- With this CD player, up to 20 tracks with any track number between 1 and 99 can be programmed.
- If a number greater than the total number of tracks on the disc is specified, that number will not be displayed.
- Programming is also possible with the disc tray open. In this case it is possible to program a track number not included on the disc, but when the program is played, that track number will be skipped.
- The entire program is cancelled when the OPEN/CLOSE button is pressed.
- If you make a mistake when programming, press the CANCEL button to cancel the mistake. (The last track in the program is cancelled each time the CANCEL button is pressed.)
- The single-track and A-B repeat functions do not work during programmed playback.
- Set the stop mode when cancelling tracks from the program.

⑥Moving ahead to the next track during playback

CD player (UCD-F10)

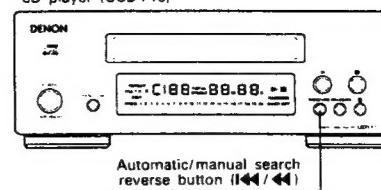


Press the automatic/manual search forward button (▶▶/▶▶).

Quick Search

(2) Reverse skip monitor

CD player (UCD-F10)



Automatic/manual search reverse button (◀◀/◀◀)

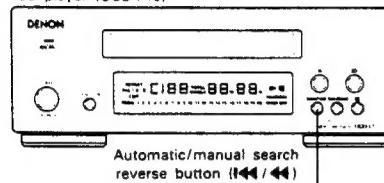
- The track currently being monitored and the elapsed time for that track are indicated on the display.

- If the beginning of the first track on the disc is reached while pressing the automatic/manual search reverse button (◀◀/◀◀), "C C" appears on the display and the manual search operation stops.

To continue playback, press and hold in the automatic/manual search forward button (▶▶/▶▶) until a track number appears on the display, then perform the desired operation.

⑦Moving back to the beginning of the track during playback

CD player (UCD-F10)



Press the automatic/manual search reverse button (◀◀/◀◀).

Quick Search

⑧Finding a certain spot on the disc while listening to the sound

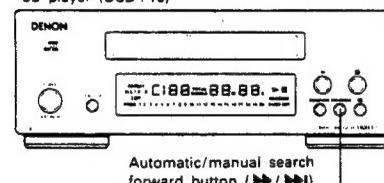
Skip Monitor

- Use this function to skip through the disc while listening to the sound.

- When the desired spot is reached using the skip monitor function, release the automatic/manual search forward button (▶▶/▶▶) or automatic/manual search reverse button (◀◀/◀◀) to resume normal playback from that point.

(1) Forward skip monitor

CD player (UCD-F10)



Automatic/manual search forward button (▶▶/▶▶)

- The track currently being monitored and the elapsed time for that track are indicated on the display.
- If the end of the last track on the disc is reached while pressing the automatic/manual search forward button (▶▶/▶▶), "C C" appears on the display and the manual search operation stops.

To continue playback, press and hold in the automatic/manual search reverse button (◀◀/◀◀) until a track number appears on the display, then perform the desired operation.

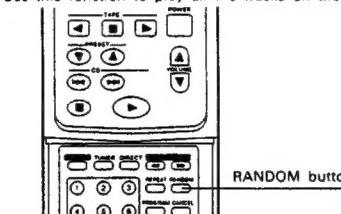
During playback, press and hold in the automatic/manual search forward button (▶▶/▶▶) to skip through the disc in the forward direction while listening to the sound.

⑨Playing the tracks in random order

Random Playback

(Using the remote control unit)

- Use this function to play all the tracks on the disc once in random order.



RANDOM button

- The programmed tracks can be played in random order by pressing the RANDOM button when tracks are programmed.

- If the RANDOM button is pressed while the repeat mode is set, the tracks are each played once in random order, then played again in another order, and so on.

- Random playback cannot be set in the single-track or A-B repeat mode.

- While the next track is being searched for, the numbers of all the tracks on the disc are displayed rapidly on the track number display so it is not possible to know which track will be played next.

- The random playback mode is not set when the RANDOM button is pressed during the single-track repeat mode. To set the random playback mode, first cancel the single-track repeat mode.

NOTES:

- The total remaining time cannot be displayed during the random playback mode.
- The random playback mode cannot be set during editing.

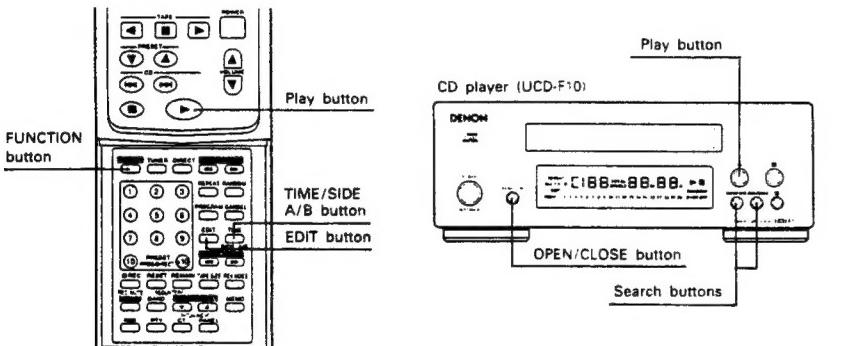
Edited Recording on Sides A and B of a Tape

This function allows edited recording according to the size of the tape. (This operation is only possible from the remote control unit.)

- Use this function to efficiently edit the tracks on a CD according to the length (time) of the tape onto which you want to record.
- Edited recording is possible with discs containing up to 20 tracks.

NOTES:

- Edited recording is not possible with discs containing more than 20 tracks.
- Load the cassette tape onto which you want to record in the cassette deck with side A on the top before starting the editing procedure. The tape is automatically wound to the beginning before recording starts.
- The editing mode is cancelled when the CD player's stop button is pressed.
- Note that even if the tape is slightly longer than the disc's total playing time, it may not be possible to record all the tracks on sides A and B because of the combination of tracks to be recorded on the different sides of the tape. "OVER" flashes the display if there are tracks which cannot be recorded onto the tape.
- When recording on an already recorded tape, if the tape is longer than the new recording, the previous recording will remain at the end of side B, so erase the tape before starting.
- To protect the recording, do not press the FUNCTION (input selector) button during edited recording.
- During edited recording, only the stop button, POWER switch, and TIME button for the CD player and the TAPE SIZE button, COUNTER button, REMAIN button, stop button, DOLBY NR button, and POWER switch for the cassette deck will function.
- Blank sections of 4 seconds are automatically created between all the selections to make it easier to search for selections on tapes recorded on this system. Since this differs from the actual time between tracks on the CD, the displayed time and the actual remaining time on the tape differ slightly.



① Recording the tracks in the same order as on the disc

Automatic Edited Recording

Example: Recording a disc containing 18 tracks and a total playing time of 56 minutes on a C-60 cassette tape

1	Press the CD player's OPEN/CLOSE button to open the disc tray. Load the disc in the disc tray.	OPEN/CLOSE 	00 00.00. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
2	Press the OPEN/CLOSE button to close the disc tray. The display appears after several seconds.	OPEN/CLOSE 	18 56.00. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

3	Press the FUNCTION button on the remote control unit or the pre-main amplifier to set the CD mode.	FUNCTION 	
	Press the EDIT button on the remote control unit to set the length of the tape. (The length is the total for sides A and B.) For a 60-minute (C-60) tape, press the EDIT button 4 times.	EDIT 	Load the cassette tape onto which you want to record in the cassette deck with side A facing up.
4	The display changes as shown below each time the EDIT button is pressed. (If the tape length has already been set once, the display changes starting from that length.)		Example: For a 60-minute tape C 60 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 ↓ 2 minutes, 40 seconds remaining on side A R - 02.40. 1 2 3 4 5 6 7 8 9 Side A display - Tracks 1 to 9 will be recorded on side A.
5	Press the TIME/SIDE A/B button on the remote control unit. The display switches between sides A and B each time the button is pressed.	TIME SIDE A/B 	1 minute, 20 seconds remaining on side B b - 0 1.20. 1 2 3 4 5 6 7 8 9 Side B display
6	Press the play button on the remote control unit or the CD player.	PLAY 	Track no. Elapsed time 0 1 0 1.2 1. 1 2 3 4 5 6 7 8 9
7	The tape is automatically wound to the beginning on the cassette deck, then recording starts.		
8	When recording on side A is completed, the CD player is set to the pause mode at the first track to be recorded on side B. When the end of side A is reached, the cassette tray opens.		
9	Turn the tape over, then press the EDIT RELAY button.	EDIT RELAY 	
10	The cassette tray automatically closes and recording begins on side B.		

② Recording the tracks in a specific order

Programmed Edited Recording

- ① Program the desired tracks as described in "Programmed Playback" on Page 22.
- ② Follow steps 4 to 6 for automatic edited recording.

NOTE

Programmed edited recording is not possible with discs containing more than 20 tracks.

13 AUTO ON FUNCTION

- When the play button or OPEN/CLOSE button on the CD player or cassette deck is pressed while the power is set to the standby mode, the power automatically turns on and the play or open/close operation is performed.
- In the same way, when the tuner preset up/down buttons on the remote control unit is pressed, the power turns on and the corresponding station is tuned in.

14 OTHER INFORMATION

Cleaning the Heads

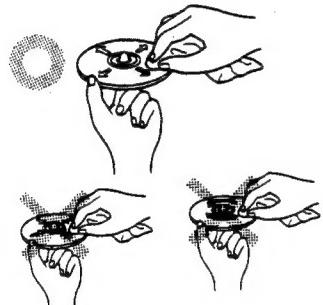
- If the cassette deck's heads are dirty, tapes cannot be played or recorded with good sound quality.
- To take full advantage of all the performance this cassette deck has to offer and ensure good quality sound, clean the heads periodically after approximately 10 hours of use, using a commercially available cleaning cassette.

NOTE
Some commercially available cleaning cassettes are highly abrasive and may damage the heads. Avoid using such cleaning cassettes.

Demagnetizing the Heads

- The heads become magnetized after they have been used for an extended period of time or if they are exposed to a magnetic object. This results in noise or a loss of the treble sound.
- If the heads are magnetized, use a commercially available cassette-type head demagnetizer to demagnetize them.

Cleaning Discs



Dust, fingerprints or spit on the disc will result in noise or skipping. If the disc is dirty or if the CD player does not operate properly, use the following procedure to clean the disc:

- Hold the disc with the signal surface (the side opposite the labelled side) facing up, as shown in the diagram.
- Wipe the disc gently from the center towards the edge (in the direction of the arrow) with a soft cloth.

Do not clean discs with the following:

- Benzene, alcohol or other solvents
- Cleaner including an abrasive
- Sprays or cleaners designed for records
- Anti-static

NOTES

- Do not wipe discs in the direction opposite the arrow or in a circular motion as with regular records.
- The disc's signal surface is easily damaged, so do not wipe it with a hard cloth or rub it strongly.

15 SPECIFICATIONS

■ Pre-main amplifier (UPA-F10)

Practical maximum output:
Low frequency adjustment range:
High frequency adjustment range:
Audio input/output jacks:

55W + 55W (4 ohms DIN)
100Hz ±8dB
10kHz ±8dB
CD input jacks, tape input/output jacks,
tuner input jacks, MD/AUX input/output jacks,
processor loop jacks, 6.3mm headphones jack and phono input jacks

AC 230V, 50Hz

130W
270 (W) × 96 (H) × 342 (D) mm
(10-5/8" × 3-25/32" × 13-15/32")
(including feet, controls and terminals)

4.5kg (9 lbs. 15 oz)

Power supply:

Power consumption:
Maximum external dimensions:

Weight:

■ Tuner (UTU-F10)

Reception frequency band:

FM: 87.50 MHZ - 108.00 MHZ

AM: 522 kHz - 1611 kHz

FM: 1.5 μ/75 ohms

AM: 20 μV

40dB (1kHz)

AC 230V, 50Hz

8W

270 (W) × 96 (H) × 318 (D) mm
(10-5/8" × 3-25/32" × 12-33/64")
(including feet, controls and terminals)

2.8kg (6 lbs. 3 oz)

■ CD player (UCD-F10)

Wow & flutter:

Below measurable limits

(±0.001% W. peak)

44.1 kHz

Optical source:

Semiconductor

Power supply:

AC 230V, 50Hz

Power consumption:

8W

Maximum external dimensions:

270 (W) × 96 (H) × 315 (D) mm
(10-5/8" × 3-25/32" × 12-13/32")

(including feet, controls and terminals)

3.3kg (7 lbs. 5 oz)

Weight:

■ Cassette deck (UDR-F10)

Type:

Heads:

Horizontal 4-track 2-channel stereo cassette deck
1 hard permalloy recording/playback head
1 double-gap ferrite erasing head

4.75 cm/s

Tape speed:

Dolby B and C NR, Dolby HX Pro

Usable tapes:

Normal, chrome and metal

Power supply:

AC 230V, 50Hz

Power consumption:

13W

Maximum external dimensions:

270 (W) × 96 (H) × 313 (D) mm
(10-5/8" × 3-25/32" × 12-21/64")

(including feet, controls and terminals)

3.8kg (8 lbs. 6 oz)

Weight:

■ Remote control unit (RC-172)

Remote control system:

Infrared pulse

Number of buttons:

50

Power supply:

Two DC 1.5V R6P/AA batteries

Maximum external dimensions:

57 (W) × 197 (H) × 21 (D) mm

(2-1/4" × 7-3/4" × 53/64")

(including feet, controls and terminals)

Weight:

130g (including batteries) (Approx. 4.6 oz)

■ Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

■ "DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

16 TROUBLESHOOTING

Check the following once more before assuming there is a problem with the system.

1. Are connections proper?

2. Is the system being operated as explained in the operating instructions?

If the system does not seem to be operating properly, check as shown on the table below. If none of these checks apply to the problem, the system may be malfunctioning. Disconnect the power cord immediately and contact your store of purchase.

	Symptom	Cause	Countermeasure	Page
General	Power does not turn on when power switch is pressed.	• Power cord is not plugged into a power outlet.	• Plug the power cord securely into an outlet.	5
	No sound is produced from the speakers.	• VOLUME control is turned down. • Headphones are connected. • Speaker cords are not securely connected.	• Set the control to an appropriate position. • Disconnect the headphones. • Connect securely.	6 6 5
	No treble sound is produced, or the position of the instruments is unclear.	• Speaker polarities (+ and -) are inverted.	• Connect the speaker cords properly.	5
	A source other than the desired one is heard.	• Function is not properly set.	• Set the desired function using the FUNCTION button.	6
Cassette deck	Recording does not start when REC/REC MUTE button is pressed.	• No cassette tape is loaded. • Accidental erasure protection tabs are broken off.	• Load a cassette tape. • Cover the tab holes with cellophane tape.	16 16
	Sound is broken or no sound is produced during recording and playback.	• Heads are dirty. • Cassette tape is defective.	• Clean the heads. • Replace the cassette tape.	25 —
	Humming sound is heard while playing cassette tapes.	• Noise from a TV. • (Noise may be produced by some types of TVs.)	• Move the TV away from the system. • Turn the TV off.	4 —
	Wow (shaky sound) is heavy during recording or playback.	• Capsules or pinch rollers are dirty.	• Clean them.	25
Tuner	Hissing sound is heard in FM programs.	• Antenna direction is poor. • Signals from the broadcast station are weak.	• Change the direction of the antenna. • Install an outdoor antenna.	4 4
	Hissing sound is heard in AM programs.	• Noise from a TV or interference from a broadcast station. •	• Turn the TV off. • Change the direction of the loop antenna. • Install an outdoor antenna.	— — 4
	Humming sound is heard in AM programs.	• Signals on the power cord are being modulated by the power source frequency.	• Insert the power cord in the opposite direction. • Install an outdoor antenna.	— 4
CD player	Total number of tracks not displayed when disc is loaded.	• Disc is loaded upside-down. • Disc is dirty. • Disc is not of the specified type.	• Reload the disc. • Clean the disc. • Replace with a disc of the specified type.	20 25 —
	Nothing happens when operating buttons are pressed. Disc stops in the middle of a track and will not play properly.	• Disc is loaded upside-down. • Foreign object on disc tray. • Disc is dirty. • Disc is scratched.	• Reload the disc. • Remove the disc and the foreign object. • Clean the disc. • Replace with an unscratched disc.	20 20 25 —
	Sound is broken.	• Dirt, fingerprints, spittle, etc. on disc. • Disc is scratched. • Player is in an unstable place and vibrates strongly.	• Clean the disc. • Replace with an unscratched disc. • Place the player in a stable place with no vibrations.	25 — —
	Humming sound is heard when disc is played.	• Signals on the power cord are being modulated by the power source frequency.	• Insert the power cord in the opposite direction.	—

• Protector circuit

The UPA-F10 is equipped with a high speed protector circuit.

This circuit protects internal parts from being damaged by strong currents generated in the set should the set be operated when the speaker terminals are incompletely connected or short-circuited.

If this protector circuit is activated, a relay sound is produced, the output to the speakers is interrupted, and the function and power LEDs flash to indicate that there is a problem. If this should happen, unplug the power cord, check the speaker connections, then plug in the power cord and turn the power back on. After several seconds, a relay sound is heard and the set starts operating properly.

- The set may not operate properly due to such external influences as lightning or static electricity. If this happens, either turn off the power with the pre-main amplifier's SYSTEM POWER switch or unplug the power cord, wait approximately 5 seconds, then plug the power cord back in.